THE

Imperial Almanack;

OR,

ANNUAL COMPENDIUM

OF

ASTRONOMICAL, STATISTICAL, SCIENTIFIC,

AND

INTERESTING INFORMATION,

For the Year of our Lord,

1823,

BEING THE THIRD AFTER BISSEXTILE OR LEAP-YEAR.

LONDON:
PRINTED FOR THE COMPANY OF STATIONERS,
AND SOLD BY G. GREENHILL, AT THEIR HALL, LUDGATE STREET.

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EXHIBITING,

BESIDES THE USUAL CONTENTS OF AN ALMANACK,

CORRECT SYNOPSES OF CURIOUS AND USEFUL PARTICULARS

RELATIVE TO

ASTRONOMY, CHEMISTRY;
CHRONOLOGY, GEOGRAPHY, LIFE-ASSURANCES AND ANNUITIES;
MORTALITY, SPECIFIC GRAVITIES, STATISTICS, &c.

Including also, in each Month of the Calendar, a ruled page to facilitate the keeping of a

METEOROLOGICAL REGISTER.

LONDON:
PRINTED FOR THE COMPANY OF STATIONERS,
BY G. WOODFALL, ANGEL COURT, SKINNER STREET;
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THE Editor of the *Imperial Almanack* has been desirous to draw into a narrow compass much useful information on several topics of general interest amongst well-informed men of all classes. He has aimed at correctness as well as utility, and hopes that, to a considerable extent, both objects have been attained. Some of the columns in the *Calendar* pages are different from any that have been hitherto introduced into our Almanacks; but there are no deviations from the usual course, but what are obviously calculated to facilitate the interesting applications of such annual performances. Of the Matter introduced after the Calendar, some particulars will be kept permanently upon our pages, others will undergo appropriate modifications in successive years, while some new, and, it is hoped, valuable information will be found introduced in this and each succeeding Almanack.

THE Editor, being anxious to produce an Almanack of real value as a work of constant reference, will be happy to receive suggestions of correction or improvement, sent (*post-paid*) to him, at Stationers' Hall.

N.B. The *Red letter Days*, as they are usually denominated, appear in this Almanack, in the Old English Letter.

CHRONOLOGICAL AND ECCLESIASTICAL NOTES FOR 1823.

Julian Period	6536	Epact	XVIII
Ep. of Nabonassar	2570	1st day of Lent	Feb. 12
Roman Indiction	11	Easter Day	March 30
Dominical Letter	C	Holy Thursday	May 8
Golden Number	19	Pentecost	May 18
Solar Cycle	12	Advent Sunday	Nov. 30

CONTENTS.

LUNATIONS.

		M D	Ceres declin.	Ceres south.
			o ′	h. m.
Last Quarter	.. 4th day .. 10 m. past 4 morn.	1	17 s 22	4 a 5
New Moon	....12th day .. 54 m. past 8 morn.	9	16 6	3 40
First Quarter	..20th day ..... 2 morn.	17	14 49	3 16
Full Moon	.....26th day .. 11 m. past 5 aftern.	25	13 31	2 53

M D	W D	Anniversaries, Holidays, Terms, &c.	Sun rises and sets.	Time on cl. at ☉'s noon	Sun's right ascension.	Sun's declin.	Moon ris. sets.	Moon south.
			h. m. h. m.	h. m. s.	h. m. s.	o ′	h. m.	h. m.
1	W	Circumcision ..	8 5 4	12 3 42	18 45 2	23 S 4	9 a 47	3 m 34
2	Th	.....	8 4 4	12 4 10	18 49 27	22 59	11 8	4 19
3	F	.....	8 4 4	12 4 38	18 53 51	22 53	morn.	5 3
4	S	.....	8 3 4	12 5 6	18 58 16	22 47	0 24	5 47
5	☪	2 S. aft. Christ.	8 2 4	12 5 33	19 2 40	22 41	1 38	6 30
6	M	Epiph. O. Chr.	8 2 4	12 6 0	19 7 3	22 34	2 50	7 14
7	Tu	[12 Day	8 1 4	12 6 26	19 11 26	22 27	4 2	8 1
8	W	Lucian	8 0 4	12 6 52	19 15 49	22 19	5 9	8 49
9	Th	.....	7 59 5	12 7 18	19 20 11	22 11	6 11	9 38
10	F	.....	7 58 5	12 7 42	19 24 32	22 3	7 2	10 29
11	S	.....	7 57 5	12 8 7	19 28 53	21 54	7 45	11 19
12	☪	1 S. aft. Epiph.	7 56 5	12 8 31	19 33 14	21 44	sets	0 a 7
13	M	Hil. Cam. T. b.	7 55 5	12 8 54	19 37 34	21 34	5 a 21	0 54
14	Tu	Oxf. T. b. [Pl. M.	7 54 5	12 9 16	19 41 53	21 24	6 33	1 39
15	W	♅. of Gloster b.	7 53 5	12 9 38	19 46 11	21 13	7 47	2 22
16	Th	.....	7 52 5	12 9 59	19 50 29	21 2	9 1	3 4
17	F	.....	7 50 5	12 10 20	19 54 46	20 51	10 16	3 47
18	S	Prisca. O. 12 D.	7 49 5	12 10 39	19 59 2	20 38	11 34	4 31
19	☪	2 S. aft. Epiph.	7 48 5	12 10 58	20 3 18	20 27	morn.	5 18
20	M	Fab. In 8 d. of St	7 46 5	12 11 17	20 7 33	20 14	0 58	6 10
21	Tu	Agnes. [Hil. 1 r.	7 45 5	12 11 34	20 11 47	20 1	2 20	7 6
22	W	Vincent	7 44 5	12 11 51	20 16 0	19 48	3 45	8 6
23	Th	Hil. Term beg.	7 42 5	12 12 7	20 20 12	19 34	5 2	9 10
24	F	.....	7 41 5	12 12 22	20 24 24	19 20	6 7	10 15
25	S	Conv. of St. Paul	7 39 5	12 12 36	20 28 35	19 5	6 54	11 17
26	☪	Septuag. Sund.	7 38 5	12 12 49	20 32 45	18 50	rises	morn.
27	M	♅. of Susser b.	7 37 5	12 13 2	20 36 54	18 35	5 a 47	0 16
28	Tu	[Hil. 2 ret.	7 35 5	12 13 14	20 41 3	18 20	7 13	1 9
29	W	K. G. IV. ac. 1820	7 33 5	12 13 25	20 45 10	18 4	8 32	1 59
30	Th	K. C. I. mar. 1649	7 31 5	12 13 35	20 49 17	17 48	9 52	2 45
31	F	K. Geo. IV. procl.	7 30 5	12 13 44	20 53 23	17 31	11 9	3 31

M D	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♄ declin.	♄ south.	♄ Mer. Alt. at London.	♅ declin.	♅ south.	♅ Mer. Alt. at London
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	o ′
1	23 S 33	11 m 48	14 56	10 N 15	7 a 21	48 44	18 N 43	8 a 54	57 12
7	23 32	11 24	14 57	10 17	6 55	48 46	18 39	8 26	57 8
13	23 31	11 0	14 58	10 20	6 29	48 49	18 38	7 59	57 7
19	23 30	10 36	14 59	10 24	6 4	48 53	18 31	7 33	57 7
25	23 29	10 12	15 0	10 30	5 39	48 59	18 46	7 8	57 9

ASTRONOMICAL FACTS AND PHÆNOMENA.

M D	
4	♄ stationary.
8	Conjunction ☿ ♀, ☿ 66′ S. of ♀.
9	☽ in apoge. ..... 24th, ☽ in perige.
12	☉ eclipsed invisible. 26th, ☽ eclipsed, partly visible.
20	☉ enters ♒ 6h. 48m. P.M.
21	♅ stationary. ..... 22d, Conjunction ☿ ♂, ☿ 27′ S. of ♂.

M D	☽'s age.	Barom.	Therm.	Hygrom.	Winds. direct.	Winds. strength	Rain, depth of.	Miscellaneous Remarks.
1	19							
2	20							
3	21							
4	☾							
5	23							
6	24							
7	25							
8	26							
9	27							
10	28							
11	29							
12	●							
13	1							
14	2							
15	3							
16	4							
17	5							
18	6							
19	7							
20	☽							
21	9							
22	10							
23	11							
24	12							
25	13							
26	○							
27	15							
28	16							
29	17							
30	18							
31	19							

M D	☾ declin.	☾ south.	☾ Mer. Alt. at London.	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♂ declin.	♂ south.	♂ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	o ′
1	20 S 31	1 a 19	16 58	23 S 36	0 a 9	14 53	24 S 52	11 m 59	13 37
7	21 29	1 13	18 0	22 53	0 16	15 36	24 6	0 a 15	14 23
13	19 13	1 6	19 11	21 45	0 22	16 44	22 23	0 30	16 6
19	18 0	1 0	20 29	20 13	0 28	18 16	19 44	0 46	18 45
25	16 35	0 55	21 54	18 21	0 33	20 8	16 14	1 1	22 15

LUNATIONS.

		M D	Ceres declin.	Ceres south.
			o ′	h. m.
Last Quarter	.. 2d day .. 34 m. past 10 night.	1	12 s 20	2 a 35
New Moon	....11th day .. 5 m. past 3 aftern.	9	10 59	2 12
First Quarter	..18th day .. 2 m. past 11 morn.	17	9 38	1 51
Full Moon	.....25th day .. 6 m. past 5 morn.	25	8 17	1 31

M D	W D	Anniversaries, Holidays, Terms, &c.	Sun rises and sets.	Time on cl. at ☉'s noon	Sun's right ascension.	Sun's declin.	Moon ris. sets.	Moon south.
			h. m. h.	h. m. s.	h. m. s.	o ′	h. m.	h. m.
1	S	[Candl. Day.	7 28 5	12 13 53	20 57 28	17 S 14	morn.	4 m15
2	♋	Sexag. S. Purif.	7 26 5	12 14 1	21 1 33	16 57	0 25	5 1
3	M	Blaise. Mor. Pu.	7 25 5	12 14 8	21 5 36	16 40	1 38	5 47
4	Tu	[3 ret.	7 23 5	12 14 14	21 9 39	16 22	2 48	6 36
5	W	Agatha	7 21 5	12 14 19	21 13 41	16 4	3 55	7 25
6	Th	.....	7 20 5	12 14 24	21 17 42	15 46	4 51	8 16
7	F	.....	7 18 5	12 14 28	21 21 42	15 27	5 36	9 6
8	S	[Sun.	7 16 5	12 14 31	21 25 42	15 9	6 10	9 56
9	♋	Quinq. or Shrove	7 14 5	12 14 33	21 29 41	14 50	6 34	10 44
10	M	In 8 day of Pur.	7 12 5	12 14 35	21 33 39	14 30	6 54	11 30
11	Tu	Shrove Tu. [4 r.	7 10 5	12 14 35	21 37 36	14 11	sets	0 a 15
12	W	Ash Wed. Hil.	7 9 5	12 14 35	21 41 32	13 51	6 a 45	0 58
13	Th	[T. ends	7 7 5	12 14 34	21 45 28	13 31	8 0	1 42
14	F	Val. O. Cand. D.	7 5 5	12 14 32	21 49 23	13 11	9 18	2 26
15	S	Cam. T div. m..	7 3 5	12 14 30	21 53 17	12 51	10 39	3 13
16	♋	1 Sun. in Lent.	7 1 5	12 14 27	21 57 10	12 30	morn.	4 3
17	M	[Quadrages.	6 59 6	12 14 23	22 1 3	12 9	0 2	4 57
18	Tu	.....	6 57 6	12 14 18	22 4 55	11 48	1 24	5 55
19	W	Ember Week..	6 55 6	12 14 13	22 8 46	11 27	2 44	6 56
20	Th	.....	6 54 6	12 14 7	22 12 37	11 6	3 52	7 59
21	F	.....	6 52 6	12 14 0	22 16 26	10 44	4 46	9 0
22	S	.....	6 50 6	12 13 53	22 20 15	10 22	5 26	9 59
23	♋	2 Sun. in Lent	6 48 6	12 13 45	22 24 4	10 0	5 52	10 54
24	M	St. Matthias. D.	6 46 6	12 13 36	22 27 52	9 38	6 13	11 45
25	Tu	[Cam. b.	6 44 6	12 13 26	22 31 39	9 16	rises	morn.
26	W	.....	6 42 6	12 13 17	22 35 25	8 54	7 a 26	0 34
27	Th	.....	6 40 6	12 13 6	22 39 12	8 32	8 45	1 21
28	F	.....	6 38 6	12 12 55	22 42 57	8 9	10 4	2 7

Place S of London: *to* } Mer. Alt. of Planet at London, } *add*
Place N of London: *from* } } *subtract*

M D	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♄ declin	♄ south.	♄ Mer. Alt. at London.	♅ declin.	♅ south.	♅ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	o ′
1	23 S 26	9 m45	15 3	10 N38	5 a 12	49 7	18 N44	6 a 40	57 13
7	23 25	9 21	15 4	10 46	4 49	49 15	18 49	6 17	57 18
13	23 24	8 58	15 5	10 55	4 27	49 24	18 56	5 55	57 25
19	23 24	8 36	15 5	11 5	4 5	49 34	19 4	5 34	57 33
25	23 23	8 13	15 6	11 16	3 44	49 45	19 14	5 13	57 43

ASTRONOMICAL FACTS AND PHÆNOMENA.

M D

3 ☿ in perihelio.
4 ☿ elong. max. Conjunction ♀ ♂, ♀ 25′ S. of ♂.
5 ☽ in apoge.....21st, ☽ in perige.
9 ☿ stationary.....11th, ☉ eclipsed invisible.
18 Inferior conjunction ☉ ☿.
19 ☉ enters ♓, 9h. 33m. A.M.

M D	☽'s age.	Barom.	Therm.	Hygrom.	Winds. direct.	Winds. strength	Rain, depth of.	Miscellaneous Remarks.
1	20							
2	☾							
3	22							
4	23							
5	24							
6	25							
7	26							
8	27							
9	28							
10	29							
11	●							
12	1							
13	2							
14	3							
15	4							
16	5							
17	6							
18	☽							
19	8							
20	9							
21	10							
22	11							
23	12							
24	13							
25	○							
26	15							
27	16							
28	17							

diff. of Lat. { the *sum* / the *diff.* } gives the Mer. Alt. at the place proposed.

M D	☾ declin.	☾ south.	☾ Mer. Alt at London.	♀ declin.	♀ south.	♀ Mer. Alt. at London.	☿ declin.	☿ south.	☿ Mer. Alt. at London.
	° ′	h. m.	° ′	° ′	h. m.	° ′	° ′	h. m.	° ′
1	14 S 48	0 a 46	23 41	15 S 45	0 a 40	22 44	11 S 34	1 a 10	26 55
7	13 10	0 40	25 19	13 15	0 45	25 14	8 11	1 4	30 18
13	11 28	0 35	27 1	10 32	0 49	27 57	6 49	0 38	31 40
19	9 42	0 29	28 47	7 39	0 54	30 50	8 5	11m 51	30 24
25	7 53	0 24	30 56	4 39	0 59	33 50	10 38	11 9	27 57

LUNATIONS.

		M D	Ceres declin.	Ceres south.
			o ′	h. m.
Last Quarter	.. 4th day .. 48 m. past 6 aftern.	1	7 s 35	1 a 22
New Moon	....12th day .. 34 m. past 6 aftern.	9	6 14	1 4
First Quarter	..19th day .. 18 m. past 6 aftern.	17	4 54	0 46
Full Moon	.....26th day .. 41 m. past 5 aftern.	25	3 33	0 28

M D	W D	Anniversaries, Holidays, Terms, &c.	Sun rises and sets.	Time on cl. at ☉'s noon	Sun's right ascension.	Sun's declin.	Moon ris. sets.	Moon south.
			h. m. h.	h. m. s	h. m. s.	o ′	h. m.	h. m.
1	S	David	6 36 6	12 12 43	22 46 42	7 S 46	11 a 20	2 m 53
2	☪	3 Sund. in Lent	6 34 6	12 12 31	22 50 26	7 24	morn.	3 41
3	M	[Chad.	6 32 6	12 12 19	22 54 10	7 1	0 34	4 29
4	Tu	.....	6 30 6	12 12 6	22 57 54	6 38	1 43	5 19
5	W	.....	6 28 6	12 11 52	23 1 37	6 15	2 44	6 10
6	Th	.....	6 26 6	12 11 39	23 5 20	5 51	3 33	7 1
7	F	Perpetua	6 24 6	12 11 24	23 9 2	5 28	4 11	7 51
8	S	.....	6 22 6	12 11 10	23 12 44	5 5	4 41	8 40
9	☪	4 or Mid-L. S.	6 20 6	12 10 55	23 16 25	4 41	5 3	9 27
10	M	.....	6 18 6	12 10 39	23 20 6	4 18	5 19	10 13
11	Tu	.....	6 16 6	12 10 23	23 23 47	3 54	5 36	10 57
12	W	Gregory, Mart.	6 14 6	12 10 7	23 27 28	3 31	sets	11 42
13	Th	.....	6 12 6	12 9 51	23 31 8	3 7	7 a 7	0 a 27
14	F	.....	6 10 6	12 9 34	23 34 48	2 44	8 27	1 14
15	S	.....	6 8 6	12 9 18	23 38 27	2 20	9 51	2 4
16	☪	5 Sund. in Lent	6 6 6	12 9 0	23 42 7	1 56	11 16	2 58
17	M	St. Pat. [Saxons	6 4 6	12 8 43	23 45 46	1 33	morn.	3 55
18	Tu	Edw.K. of West	6 2 6	12 8 25	23 49 25	1 9	0 38	4 56
19	W	.....	6 0 6	12 8 7	23 53 3	0 45	1 51	5 58
20	Th	Ds. of Cumb. b.	5 58 7	12 7 49	23 56 42	0 22	2 49	6 59
21	F	Cam. T. e. Ben.	5 56 7	12 7 31	0 0 20	0 N 2	3 29	7 57
22	S	Oxford T. ends	5 54 7	12 7 13	0 3 58	0 26	4 0	8 52
23	☪	6 or Palm Sund.	5 52 7	12 6 54	0 7 36	0 49	4 23	9 43
24	M	[Day	5 50 7	12 6 36	0 11 14	1 13	4 42	10 32
25	Tu	Annun. or Lady-	5 49 7	12 6 17	0 14 52	1 37	4 58	11 19
26	W	.....	5 47 7	12 5 59	0 18 30	2 0	rises	morn.
27	Th	Maundy Thurs.	5 45 7	12 5 40	0 22 8	2 24	7 a 46	0 5
28	F	Good Friday..	5 43 7	12 5 21	0 25 45	2 47	9 4	0 51
29	S	.....	5 41 7	12 5 3	0 29 23	3 11	10 20	1 39
30	☪	Easter Day....	5 39 7	12 4 44	0 33 1	3 34	11 33	2 28
31	M	Easter Monday	5 37 7	12 4 25	0 36 39	3 57	morn.	3 18

M D	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♄ declin.	♄ south.	♄ Mer. Alt. at London.	♅ declin.	♅ south.	♅ Mer. Alt. at London.
	o ′	h. m	o ′	o ′	h. m.	o ′	o ′	h. m	o ′
1	23 S 21	8 m 1	15 8	11 N 21	3 a 30	49 53	19 N 21	5 a 0	57 50
7	23 21	7 39	15 8	11 36	3 10	50 5	19 32	4 41	58 1
13	23 20	7 17	15 9	11 49	2 50	50 18	19 44	4 22	58 13
19	23 20	6 56	15 9	12 3	2 31	50 32	19 56	4 4	58 25
25	23 19	6 35	15 10	12 16	2 12	50 45	20 9	3 47	58 38

ASTRONOMICAL FACTS AND PHÆNOMENA.

M D	
4	☿ stationary.
5	☽ in apoge.....20th, ☽ in perige.
16	☿ elong. max.
21	☉ enters ♈, 9h. 49m. A.M.
22	☿ in aphelio.
24	Conjunction ☉ ♂.

M D	☽'s age.	Barom.	Therm.	Hygrom.	Winds. direct.	Winds. strength	Rain, depth of.	Miscellaneous Remarks.
1	13							
2	19							
3	20							
4	☾							
5	22							
6	23							
7	24							
8	25							
9	26							
10	27							
11	28							
12	●							
13	1							
14	2							
15	3							
16	4							
17	5							
18	6							
19	☽							
20	8							
21	9							
22	10							
23	11							
24	12							
25	13							
26	○							
27	15							
28	16							
29	17							
30	18							
31	19							

M D	♂ declin.	♂ south.	♂ Mer. Alt. at London.	♀ declin.	♀ south.	♀ Mer. Alt. at London.	☿ declin.	☿ south.	☿ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	o ′
1	6 S 39	0 a 21	31 50	2 S 36	1 a 2	35 53	12 S 7	10 m46	26 22
7	4 47	0 16	33 42	0 N30	1 7	38 59	13 23	10 26	25 6
13	2 53	0 11	35 36	3 36	1 12	42 5	13 28	10 18	25 1
19	0 59	0 6	37 30	6 39	1 17	45 8	12 29	10 19	26 0
25	0 N55	0 1	39 21	9 37	1 23	48 6	10 34	10 25	27 55

LUNATIONS.

Last Quarter	3d	day	10 m. past 3 aftern.
New Moon	11th	day	48 m. past 6 morn.
First Quarter	18th	day	11 m. bef. 1 morn.
Full Moon	25th	day	59 m. past 6 morn.

M D	Ceres declin.	Ceres south.
	o ′	h m.
1	2 S 23	0 a 13
9	1 5	11 m55
17	0 N 11	11 38
25	1 26	11 20

M D	W D	Anniversaries, Holidays, Terms, &c.	Sun rises and sets.	Time on cl. at ⊙'s noon	Sun's right ascension.	Sun's declin.	Moon ris. sets.	Moon south.
			h. m. h.	h. m. s.	h. m. s.	o ′	h. m.	h. m.
1	Tu	Easter Tuesday	5 35 7	12 4 7	0 40 17	4 N 20	0 m 38	4 m 9
2	W	.....	5 33 7	12 3 49	0 43 55	4 44	1 31	5 0
3	Th	Rd. Bp. Chich.	5 31 7	12 3 30	0 47 34	5 7	2 13	5 51
4	F	St. Ambrose....	5 29 7	12 3 12	0 51 12	5 30	2 47	6 40
5	S	[Lady Day	5 27 7	12 2 55	0 54 51	5 52	3 13	7 27
6	E	Low-Sund. Old	5 25 7	12 2 37	0 58 30	6 15	3 32	8 13
7	M	.....	5 23 7	12 2 19	1 2 9	6 38	3 48	8 58
8	Tu	.....	5 21 7	12 2 2	1 5 48	7 0	4 2	9 42
9	W	Oxf.& Cam.T.b.	5 19 7	12 1 45	1 9 27	7 23	4 16	10 27
10	Th	.....	5 17 7	12 1 28	1 13 7	7 45	4 32	11 14
11	F	.....	5 15 7	12 1 12	1 16 47	8 7	sets	0 a 4
12	S	.....	5 13 7	12 0 56	1 20 28	8 29	9 a 3	0 57
13	E	2 S. aft. Easter	5 11 7	12 0 40	1 24 8	8 51	10 29	1 55
14	M	Easter 1 ret. ..	5 9 7	12 0 24	1 27 49	9 13	11 47	2 56
15	Tu	.....	5 7 7	12 0 9	1 31 30	9 35	morn.	3 59
16	W	East. Term beg.	5 5 7	11 59 54	1 35 12	9 56	0 50	5 1
17	Th	.....	5 4 7	11 59 39	1 38 54	10 17	1 37	6 1
18	F	.....	5 2 7	11 59 25	1 42 36	10 39	2 16	6 56
19	S	Alphege	5 0 7	11 59 10	1 46 19	10 59	2 38	7 47
20	E	3 S. aft. Easter	4 58 8	11 58 57	1 50 2	11 20	2 55	8 36
21	M	Easter 2 ret. ..	4 56 8	11 58 44	1 53 45	11 41	3 10	9 22
22	Tu	.....	4 54 8	11 58 32	1 57 29	12 1	3 26	10 7
23	W	St. Geo. K.b.d.k.	4 52 8	11 58 19	2 1 13	12 21	3 40	10 53
24	Th	[Glost. b.	4 51 8	11 58 8	2 4 58	12 41	3 56	11 39
25	F	St. Mark. Ds. of	4 49 8	11 57 56	2 8 43	13 1	rises	morn.
26	S	.....	4 47 8	11 57 45	2 12 28	13 21	9 a 22	0 27
27	E	4 S. after Easter	4 45 8	11 57 35	2 16 15	13 40	10 30	1 16
28	M	Easter 3 ret. ..	4 43 8	11 57 25	2 20 1	13 59	11 28	2 7
29	Tu	.....	4 42 8	11 57 16	2 23 48	14 18	morn.	2 59
30	W	.....	4 40 8	11 57 7	2 27 36	14 36	0 14	3 50

M D	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♄ declin.	♄ south.	♄ Mer. Alt. at London.	♅ declin.	♅ south.	♅ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	o ′
1	23 S 18	6 m 11	15 11	12 N 33	1 a 50	51 2	20 N 25	3 a 27	58 54
7	23 18	5 49	15 11	12 47	1 31	51 16	20 38	3 9	59 7
13	23 18	5 28	15 11	13 2	1 11	51 31	20 51	2 52	59 20
19	23 18	5 6	15 11	13 16	0 52	51 45	21 4	2 35	59 33
25	23 18	4 44	15 11	13 30	0 33	51 59	21 17	2 18	59 46

ASTRONOMICAL FACTS AND PHÆNOMENA.

M D	
2	☽ in apoge.....14th, ☽ in perige.....30th, ☽ in apoge.
16	☊ stationary.
20	☉ enters ♉, 10h. 19m. P.M.
23	Conjunction ☿ ♂, ☿ 40′ S. of ♂.
28	Superior conjunction ☉ ☿.
29	Conjunction ♀ ♌, ♀ 96′ N. of ♌.

M D	☽'s age.	Barom.	Therm.	Hygrom.	Winds. direct.	Winds. strength	Rain, depth of.	Miscellaneous Remarks.
1	20							
2	21							
3	☾							
4	23							
5	24							
6	25							
7	26							
8	27							
9	28							
10	29							
11	●							
12	1							
13	2							
14	3							
15	4							
16	5							
17	6							
18	☽							
19	8							
20	9							
21	10							
22	11							
23	12							
24	13							
25	○							
26	15							
27	16							
28	17							
29	18							
30	19							

M D	♂ declin.	♂ south.	♂ Mer. Alt. at London.	♀ declin.	♀ south.	♀ Mer. Alt. at London.	☿ declin.	☿ south.	☿ Mer. Alt. at London.
	° ′	h m.	° ′	° ′	h. m.	° ′	° ′	h m.	° ′
1	3 N 6	11 m56	41 35	12 N 55	1 a 30	51 24	7 S 17	10 m36	31 12
7	4 57	11 51	43 26	15 32	1 36	54 1	3 40	10 49	34 49
13	6 45	11 46	45 14	17 56	1 43	56 25	0 N 37	11 4	39 6
19	8 31	11 40	47 0	20 3	1 50	58 32	5 28	11 22	43 57
25	10 13	11 35	48 42	21 51	1 58	60 20	10 39	11 44	49 8

LUNATIONS.

	M D	Ceres declin.	Ceres south.
		o ′	h. m.
Last Quarter .. 3d day .. 48 m. past 9 morn.	1	2N 20	11 m 5
New Moon ....10th day .. 13 m. past 4 aftern.	9	3 29	10 46
First Quarter ..17th day .. 32 m. past 7 morn.	17	4 35	10 26
Full Moon.....24th day .. 7 m. past 9 aftern.	25	5 38	10 6

M D	W D	Anniversaries, Holidays, Terms, &c.	Sun rises and sets.	Time on cl. at ☉'s noon	Sun's right ascension.	Sun's declin.	Moon ris. sets.	Moon south.
			h. m. h.	h. m. s.	h. m. s.	o ′	h. m.	h. m.
1	Th	St. Phil. & Jas.	4 38 8	11 56 58	2 31 24	14 N55	0 m52	4 m39
2	F	.....	4 36 8	11 56 51	2 35 13	15 13	1 25	5 26
3	S	Inv. of the Cross	4 34 8	11 56 43	2 39 2	15 31	1 40	6 12
4	☉	Rogation Sund.	4 33 8	11 56 37	2 42 52	15 49	1 57	6 56
5	M	5 w. af. East. 4 r.	4 31 8	11 56 31	2 46 43	16 6	2 12	7 39
6	Tu	John Evan. ante	4 29 8	11 56 25	2 50 34	16 23	2 26	8 23
7	W	[P. L.	4 28 8	11 56 21	2 54 26	16 40	2 40	9 8
8	Th	Asc. Holy Thur.	4 26 8	11 56 16	2 58 18	16 57	2 53	9 56
9	F	On m. Asc. 5 r.	4 24 8	11 56 13	3 2 11	17 13	3 13	10 48
10	S	.....	4 23 8	11 56 9	3 6 4	17 29	sets	11 44
11	☉	Sun. after Ascen.	4 21 8	11 56 7	3 9 58	17 45	9 a 30	0 a 45
12	M	Easter Term e.	4 20 8	11 56 5	3 13 53	18 0	10 42	1 49
13	Tu	Old May Day..	4 18 8	11 56 4	3 17 48	18 15	11 40	2 54
14	W	.....	4 17 8	11 56 3	3 21 44	18 30	morn.	3 56
15	Th	.....	4 15 8	11 56 2	3 25 40	18 45	0 16	4 54
16	F	.....	4 13 8	11 56 3	3 29 37	18 59	0 43	5 47
17	S	Oxf. Term ends	4 12 8	11 56 3	3 33 34	19 13	1 3	6 37
18	☉	Whit. Sunday..	4 11 8	11 56 5	3 37 32	19 26	1 20	7 23
19	M	Wh. M. Dunst.	4 9 8	11 56 7	3 41 30	19 39	1 35	8 8
20	Tu	Whit. Tu. [T. b.	4 8 8	11 56 9	3 45 29	19 52	1 49	8 52
21	W	Emb. W. Oxf.	4 6 8	11 56 12	3 49 29	20 5	2 4	9 38
22	Th	Prs. of Homb. b.	4 5 8	11 56 16	3 53 29	20 17	2 21	10 24
23	F	[Cam. T. d. n.	4 4 8	11 56 20	3 57 29	20 29	2 43	11 12
24	S	.....	4 2 8	11 56 24	4 1 31	20 40	rises	morn.
25	☉	Trinity Sunday	4 1 8	11 56 29	4 5 32	20 52	9 a 22	0 2
26	M	Aug. abp. m. Tr.	4 0 8	11 56 35	4 9 34	21 2	10 12	0 53
27	Tu	Ven. Bede. [1 r.	3 59 9	11 56 41	4 13 37	21 13	10 51	1 44
28	W	[Corp. Christi	3 58 9	11 56 47	4 17 40	21 23	11 21	2 34
29	Th	K. Cha. II. rest.	3 57 9	11 56 54	4 21 44	21 33	11 44	3 21
30	F	Trin. Term. beg.	3 56 9	11 57 2	4 25 48	21 42	morn.	4 7
31	S	.....	3 55 9	11 57 10	4 29 52	21 51	0 1	4 51

M D	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♄ declin.	♄ south.	♄ Mer. Alt. at London.	♅ declin.	♅ south.	♅ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	o ′
1	23 S 19	4 m20	15 10	13 N45	0 a 13	52 14	21 N30	2 a 1	59 59
7	23 19	3 57	15 10	13 59	11 m54	52 28	21 42	1 41	60 11
13	23 20	3 34	15 9	14 12	11 33	52 41	21 53	1 26	60 22
19	23 20	3 10	15 9	14 26	11 12	52 55	22 4	1 8	60 33
25	23 21	2 44	15 8	14 39	10 51	53 8	22 14	0 50	60 43

ASTRONOMICAL FACTS AND PHÆNOMENA.

M D	
4	Conjunction ☉ ♄.
9	☿ in perihelio.
12	☽ in perige.....27th, ☽ in apoge.
21	☉ enters ♊, 10h. 39m. P.M.
28	☿ elong. max.

M D	☽'s age.	Barom.	Therm.	Hygrom.	Winds. direct.	Winds. strength	Rain, depth of.	Miscellaneous Remarks.
1	20							
2	21							
3	☾							
4	23							
5	24							
6	25							
7	26							
8	27							
9	28							
10	●							
11	1							
12	2							
13	3							
14	4							
15	5							
16	6							
17	☽							
18	8							
19	9							
20	10							
21	11							
22	12							
23	13							
24	○							
25	15							
26	16							
27	17							
28	18							
29	19							
30	20							
31	21							

M D	☽ declin.	☽ south.	☽ Mer. Alt. at London.	☿ declin.	☿ south.	☿ Mer. Alt. at London.	☿ declin.	☿ south.	☿ Mer. Alt. at London.
	° ′	h. m.	° ′	° ′	h. m.	° ′	° ′	h. m.	° ′
1	11 N51	11 m29	50 20	23 N19	2 a 6	61 48	15 N50	0 a 16	54 19
7	13 25	11 23	51 54	24 23	2 14	62 52	20 20	0 38	58 49
13	14 53	11 17	53 22	25 2	2 22	63 31	23 31	1 4	62 0
19	16 16	11 11	54 45	25 17	2 30	63 46	25 12	1 25	63 41
25	17 33	11 4	56 2	25 6	2 37	63 35	25 34	1 37	64 3

LUNATIONS.

		M D	Ceres declin.	Ceres south.
			o ′	h. m.
Last Quarter ..	2d day .. 22 m. past 1 morn.	1	6 N 32	9 m 47
New Moon	8th day .. 48 m. past 11 aftern.	9	7 29	9 25
First Quarter ..	15th day .. 23 m. past 3 aftern.	17	8 22	9 3
Full Moon.....	23d day .. 3 m. past noon.	25	9 12	8 41

M D	W D	Anniversaries, Holidays, Terms, &c	Sun rises and sets.	Time on cl. at ☉'s noon	Sun's right ascension.	Sun's declin.	Moon ris. sets.	Moon south.
			h. m. s.	h. m. s.	h. m. s	o ′	h. m.	h. m.
1	♐	1 S. af. Tr. Nic.	3 54 9	11 57 18	4 33 57	21 N 59	0 m 15	5 m 33
2	M	In 8 d. H. T. 2 r.	3 53 9	11 57 27	4 38 3	22 8	0 29	6 16
3	Tu	.....	3 52 9	11 57 36	4 42 9	22 15	0 42	6 58
4	W	[Boniface	3 51 9	11 57 46	4 46 15	22 23	0 57	7 43
5	Th	♅, of Cumb. b.	3 50 9	11 57 56	4 50 22	22 30	1 16	8 32
6	F	.....	3 49 9	11 58 7	4 54 29	22 37	1 37	9 25
7	S	.....	3 48 9	11 58 17	4 58 36	22 43	2 4	10 23
8	♐	2 Sun. aft. Trin.	3 48 9	11 58 29	5 2 44	22 49	sets	11 26
9	M	In 15 d. H. T. 3 r.	3 47 9	11 58 40	5 6 52	22 54	9 a 21	0 a 32
10	Tu	.....	3 46 9	11 58 52	5 11 0	22 59	10 8	1 38
11	W	St. Barnabas ..	3 46 9	11 59 3	5 15 8	23 4	10 40	2 39
12	Th	.....	3 45 9	11 59 16	5 19 17	23 8	11 4	3 36
13	F	.....	3 45 9	11 59 28	5 23 26	23 12	11 23	4 28
14	S	.....	3 44 9	11 59 40	5 27 35	23 15	11 39	5 16
15	♐	3 Sun. aft. Trin.	3 44 9	11 59 53	5 31 44	23 18	11 53	6 2
16	M	In 3 w. H. T. 4 r.	3 44 9	12 0 6	5 35 54	23 21	morn.	6 47
17	Tu	St. Alban	3 44 9	12 0 18	5 40 3	23 23	0 8	7 32
18	W	Trin. Term ends	3 45 9	12 0 31	5 44 12	23 25	0 23	8 18
19	Th	[W. Sax.		12 0 44	5 48 22	23 26	0 41	9 5
20	F	Trans. Edw. K.		12 0 57	5 52 31	23 27	1 6	9 54
21	S	Longest day ..		12 1 10	5 56 41	23 28	1 36	10 44
22	♐	4 Sun. aft. Trin.		12 1 23	6 0 50	23 28	2 16	11 35
23	M	[Day		12 1 36	6 5 0	23 28	rises	morn.
24	Tu	Nat. J. Bap. Mid.		12 1 49	6 9 9	23 27	9 a 19	0 25
25	W	.....		12 2 1	6 13 18	23 26	9 44	1 13
26	Th	.....	3 43 9	12 2 14	6 17 28	23 24	10 5	1 59
27	F	.....	3 44 9	12 2 26	6 21 37	23 22	10 20	2 43
28	S	[Peter.	3 44 9	12 2 39	6 25 46	23 20	10 33	3 26
29	♐	5 S. af. Trin. St.	3 44 9	12 2 51	6 29 55	23 17	10 46	4 7
30	M	.....	3 45 9	12 3 3	6 34 3	23 14	10 59	4 49

Longest day at London is 16h. 34m. 4s.

M D	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♄ declin.	♄ south.	♄ Mer. Alt. at London.	♅ declin.	♅ south.	♅ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	♒ ′	h. m.	o ′
1	23 S 23	2 m 15	15 6	14 N 53	10 m 26	53 22	22 N 25	0 a 29	60 54
7	23 24	1 50	15 5	15 5	10 4	53 34	22 34	0 10	61 3
13	23 25	1 25	15 4	15 16	9 41	53 45	22 41	11 m 51	61 10
19	23 26	0 59	15 3	15 17	9 21	53 56	22 48	11 32	61 17
25	23 27	0 33	15 2	15 36	8 59	54 5	22 53	11 13	61 22

ASTRONOMICAL FACTS AND PHÆNOMENA.

MD	
9	☽ in perige.....24th, ☽ in apoge.
10	Conjunction ☉☿.
11	☿ stationary.
18	☿ in aphelio.
22	☉ enters ♋ 7h. 10m. A.M.
24	Inferior conjunction ☉☿.

MD	☽'s age.	Barom.	Therm.	Hygrom.	Winds. direct.	Winds. strength	Rain, depth of.	Miscellaneous Remarks.
1	22							
2	☾							
3	24							
4	25							
5	26							
6	27							
7	28							
8	●							
9	1							
10	2							
11	3							
12	4							
13	5							
14	6							
15	☽							
16	8							
17	9							
18	10							
19	11							
20	12							
21	13							
22	14							
23	○							
24	16							
25	17							
26	18							
27	19							
28	20							
29	21							
30	22							

MD	♂ declin.		♂ south.		♂ Mer. Alt. at London.		♀ declin.		♀ south.		♀ Mer. Alt. at London.		☿ declin.		☿ south.		☿ Mer. Alt. at London.	
	o	′	h.	m.	o	′	o	′	h.	m.	o	′	o	′	h.	m.	o	′
1	18	N55	10	m56	57	24	24	N21	2	a44	62	50	24	N47	1	a39	63	16
7	19	58	10	49	58	27	23	17	2	50	61	46	23	28	1	29	61	57
13	20	55	10	42	59	24	21	52	2	54	60	21	21	52	1	6	60	21
19	21	43	10	35	60	12	20	7	2	57	58	36	20	18	0	33	58	47
25	22	25	10	28	60	54	18	5	3	0	56	34	19	8	11	m51	57	37

LUNATIONS.

Last Quarter .. 1st day .. 31 m. past 1 aftern.
New Moon .... 8th day .. 40 m. past 6 morn.
First Quarter ..15th day .. 21 m. past 1 morn.
Full Moon ....23d day .. 28 m. past 3 morn.
Last Quarter ..30th day .. 50 m. past 10 aftern.

M D	Ceres declin.	Ceres south.
	o ′	h. m.
1	9 S 46	8 m24
9	10 28	8 2
17	11 7	7 40
25	11 40	7 18

M D	W D	Anniversaries, Holidays, Terms, &c.	Sun rises and sets.		Time on cl. at ☉'s noon			Sun's right ascension.			Sun's declin.		Moon rises. sets.		Moon south.	
			h. m.	h.	h.	m.	s.	h.	m.	s.	o	′	h.	m.	h.	m.
1	Tu	Oxf. Act. Cam.	3 45	9	12	3	15	6	38	12	23 N	10	11 a	12	5m	31
2	W	Vis.B.V.M.[Co.	3 45	9	12	3	27	6	42	20	23	6	11	32	6	17
3	Th	Dog days begin	3 46	9	12	3	38	6	46	28	23	2	11	54	7	7
4	F	Cam.T.e. Tr. St.	3 47	9	12	3	49	6	50	36	22	57	morn.		8	1
5	S	Oxf. T. e. [Mar.	3 47	9	12	4	0	6	54	43	22	52	0	26	9	0
6	☌	6 S. aft. Tr. O.	3 48	9	12	4	11	6	58	51	22	46	1	12	10	4
7	M	T.aBec.[Mid.D.	3 49	9	12	4	21	7	2	58	22	40	2	16	11	10
8	Tu	.....	3 49	9	12	4	31	7	7	4	22	34	sets		0 a	14
9	W	.....	3 50	9	12	4	41	7	11	10	22	27	8 a	59	1	15
10	Th	.....	3 51	9	12	4	50	7	15	16	22	20	9	20	2	11
11	F	.....	3 52	9	12	4	59	7	19	21	22	13	9	38	3	3
12	S	.....	3 53	9	12	5	7	7	23	26	22	5	9	54	3	51
13	☌	7 Sun. aft. Trin.	3 54	9	12	5	15	7	27	30	21	56	10	9	4	38
14	M	.....	3 55	9	12	5	22	7	31	34	21	43	10	25	5	24
15	Tu	Swithin	3 56	9	12	5	29	7	35	38	21	39	10	43	6	10
16	W	.....	3 57	9	12	5	35	7	39	41	21	29	11	6	6	57
17	Th	.....	3 58	9	12	5	41	7	43	45	21	19	11	32	7	46
18	F	[1821	3 59	9	12	5	46	7	47	45	21	9	morn.		8	36
19	S	H. Geo. IV. cr.	4 0	8	12	5	51	7	51	46	20	59	0	9	9	27
20	☌	8 Sun. aft. Trin.	4 1	8	12	5	55	7	55	47	20	48	0	56	10	17
21	M	[Margaret	4 2	8	12	5	59	7	59	47	20	37	1	53	11	6
22	Tu	Magdalene	4 4	8	12	6	2	8	3	46	20	25	2	59	11	53
23	W	.....	4 5	8	12	6	4	8	7	46	20	13	rises		morn.	
24	Th	[Camb. b.	4 7	8	12	6	6	8	11	44	20	1	8 a	23	0	38
25	F	St. Jas. Ds. of	4 8	8	12	6	7	8	15	42	19	48	3	31	1	22
26	S	St. Anne	4 9	8	12	6	8	8	19	39	19	36	8	51	2	4
27	☌	9 Sun. aft. Trin.	4 11	8	12	6	8	8	23	36	19	22	9	5	2	45
28	M	.....	4 12	8	12	6	8	8	27	32	19	9	9	19	3	27
29	Tu	.....	4 14	8	12	6	7	8	31	28	18	55	9	34	4	11
30	W	.....	4 15	8	12	6	5	8	35	23	18	41	9	54	4	58
31	Th	.....	4 17	8	12	6	3	8	39	17	18	26	10	23	5	49

M D	☿ declin.		☿ south.		☿ Mer. Alt. at London.		♄ declin.		♄ south.		♄ Mer. Alt. at London.		♅ declin.		♅ south.		♅ Mer Alt. at London.	
	o	′	h.	m.	o	′	o	′	h.	m.	o	′	o	′	h.	m.	o	′
1	23 S	29	0 m	6	15	0	15 N	46	8 m	36	54	15	22 N	58	10 m	54	61	27
7	23	30	11 a	36	14	59	15	54	8	14	54	23	23	2	10	35	61	31
13	23	31	11	11	14	58	16	2	7	52	54	31	23	5	10	17	61	34
19	23	32	10	45	14	57	16	8	7	29	54	37	23	7	9	18	61	36
25	23	33	10	20	14	56	16	14	7	7	54	43	23	9	9	40	61	38

M D	ASTRONOMICAL FACTS AND PHÆNOMENA.
2	Opposition ☉☿..... ☽ in apoge.
5	☿ stationary.
7	☉ eclip. vis..... ☽ in perige.....21st, ☽ in apoge.
16	☿ elong. max.
17	Conjunction ♅♂, ♅ 45′ S. of ♂.
23	☉ enters ♌, 5h. 57m. P.M.; ☽ ecl. partly vis.

M D	☽'s age.	Barom.	Therm.	Hygrom.	Winds. direct.	Winds. strength	Rain, depth of.	Miscellaneous Remarks.
1	☾							
2	24							
3	25							
4	26							
5	27							
6	28							
7	29							
8	●							
9	1							
10	2							
11	3							
12	4							
13	5							
14	6							
15	☽							
16	8							
17	9							
18	10							
19	11							
20	12							
21	13							
22	14							
23	○							
24	16							
25	17							
26	18							
27	19							
28	20							
29	21							
30	☾							
31	23							

M D	♂ declin.	♂ south.	♂ Mer. Alt. at London.	♀ declin.	♀ south.	♀ Mer. Alt. at London.	☿ declin.	☿ south.	☿ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	o ′
1	22 N59	10 m21	61 28	15 N43	3 a 1	54 17	18 N45	11 m17	57 14
7	23 25	10 14	61 54	13 19	3 1	51 48	19 10	10 49	57 39
13	23 43	10 7	62 12	10 40	3 1	49 9	20 14	10 35	58 43
19	23 54	10 1	62 23	7 55	2 59	46 24	21 28	10 34	59 57
25	23 58	9 54	62 27	5 6	2 57	43 35	22 14	10 46	60 43

LUNATIONS.

	M D	Ceres declin.	Ceres south.
		o ′	h. m.
New Moon .... 6th day .. 53 m. past 1 aftern.	1	12 N 7	6 m59
First Quarter ..13th day .. 20 m. past 2 aftern.	9	12 35	6 37
Full Moon..... 21st day .. 41 m. past 6 aftern.	17	12 54	6 14
Last Quarter ..29th day .. 17 m. past 6 morn.	25	13 12	5 51

M D	W D	Anniversaries, Holidays, Terms, &c.	Sun rises and sets.	Time on cl. at ☉'s noon	Sun's right ascension.	Sun's declin.	Moon ris. sets.	Moon south.
			h. m. h.	h. m. s.	h. m. s.	o ′	h. m.	h. m.
1	F	Lammas Day ..	4 18 8	12 6 0	8 43 11	18 N11	11 a 1	6 45
2	S	.....	4 20 8	12 5 57	8 47 4	17 56	11 56	7 45
3	☪	10 S. aft. Trin.	4 21 8	12 5 53	8 50 57	17 41	morn.	8 48
4	M	.....	4 23 8	12 5 49	8 54 49	17 25	1 9	9 52
5	Tu	.....	4 24 8	12 5 44	8 58 40	17 9	2 37	10 55
6	W	Transfiguration	4 26 8	12 5 38	9 2 31	16 53	sets	11 53
7	Th	Name of Jesus	4 28 8	12 5 32	9 6 21	16 37	7 a 38	0 a 48
8	F	.....	4 29 8	12 5 25	9 10 11	16 20	7 58	1 39
9	S	[St. Lawr.	4 31 8	12 5 17	9 14 0	16 3	8 15	2 28
10	☪	11 S. aft. Trin.	4 33 8	12 5 9	9 17 49	15 45	8 31	3 16
11	M	Dog days end	4 35 8	12 5 1	9 21 37	15 28	8 48	4 4
12	Tu	K. G. IV. b. 1762	4 36 8	12 4 52	9 25 24	15 10	9 7	4 52
13	W	Ds. Clar. b. Old	4 38 8	12 4 42	9 29 11	14 52	9 34	5 41
14	Th	[Lammas d.	4 40 8	12 4 31	9 32 57	14 34	10 9	6 32
15	F	Assumption ..	4 41 8	12 4 20	9 36 42	14 15	10 53	7 23
16	S	D. of York b. ..	4 43 8	12 4 9	9 40 27	13 57	11 47	8 14
17	☪	12 S. a. Tr. Ds.	4 45 8	12 3 57	9 44 12	13 38	morn.	9 4
18	M	[of Kent b.	4 47 8	12 3 44	9 47 56	13 18	0 50	9 52
19	Tu	.....	4 49 8	12 3 31	9 51 39	12 59	2 0	10 38
20	W	.....	4 50 8	12 3 18	9 55 22	12 39	3 11	11 23
21	Th	D. of Clar. b...	4 52 8	12 3 4	9 59 5	12 20	rises	morn.
22	F	.....	4 54 8	12 2 49	10 2 47	12 0	7 a 1	0 6
23	S	[St. Bartlol.	4 56 8	12 2 34	10 6 28	11 39	7 16	0 48
24	☪	13 S. aft. Trin.	4 58 8	12 2 19	10 10 9	11 19	7 32	1 31
25	M	.....	5 0 7	12 2 3	10 13 50	10 59	7 47	2 14
26	Tu	.....	5 2 7	12 1 47	10 17 30	10 38	8 7	3 0
27	W	.....	5 3 7	12 1 30	10 21 10	10 17	8 34	3 50
28	Th	St. Augustine..	5 5 7	12 1 13	10 24 50	9 56	9 6	4 43
29	F	St. J. Bapt. beh.	5 7 7	12 0 57	10 28 29	9 35	9 53	5 40
30	S	.....	5 9 7	12 0 38	10 32 8	9 15	10 56	6 41
31	☪	14 S. aft. Trin	5 11 7	12 0 20	10 35 46	8 52	morn.	7 43

M D	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♄ declin.	♄ south.	♄ Mer. Alt. at London.	♅ declin.	♅ south.	♅ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h m.	o ′
1	23 S 34	9 a 52	14 55	16 N20	6 m42	54 49	23 N10	9 m19	61 39
7	23 34	9 28	14 55	16 24	6 20	54 53	23 10	9 1	61 39
13	23 35	9 4	14 54	16 27	5 58	54 56	23 9	8 43	61 38
19	23 36	8 41	14 53	16 29	5 37	54 58	23 8	8 25	61 37
25	23 36	8 18	14 53	16 30	5 16	54 59	23 6	8 8	61 35

ASTRONOMICAL FACTS AND PHÆNOMENA.

M D	
1	☿ in perihelio..... ♀ elong. max.
5	☽ in perige.....17th, ☽ in apoge.
6	☉ eclipsed invisible.
11	Superior conjunction ☉ ☿.
24	☉ enters ♍, 0h. 24m. A.M.
28	♀ in aphelio.

M D	☽'s age.	Barom.	Therm.	Hygrom.	Winds. direct.	Winds. strength	Rain, depth of.	Miscellaneous Remarks.
1	24							
2	25							
3	26							
4	27							
5	28							
6	●							
7	1							
8	2							
9	3							
10	4							
11	5							
12	6							
13	☽							
14	8							
15	9							
16	10							
17	11							
18	12							
19	13							
20	14							
21	○							
22	16							
23	17							
24	18							
25	19							
26	20							
27	21							
28	22							
29	☾							
30	24							
31	25							

M D	♂ declin.	♂ south.	♃ Mer. Alt. at London.	♀ declin.	♀ south.	♀ Mer. Alt. at London.	☿ declin.	☿ south.	☿ Mer. Alt. at London.
	o /	h. m.	o /	o /	h. m.	o /	o /	h. m.	o /
1	23 N 52	9 m 47	62 21	1 N 46	2 a 51	10 15	21 N 39	11m 14	60 8
7	23 40	9 41	62 9	1 S 5	2 51	37 24	19 29	11 42	57 58
13	23 21	9 36	61 50	3 51	2 46	34 38	16 2	0 a 9	54 31
19	22 56	9 30	61 25	6 32	2 41	31 57	11 50	0 31	50 19
25	22 25	9 25	60 54	9 5	2 34	29 24	7 19	0 49	45 48

LUNATIONS.

New Moon .... 4th day	..19 m. past 10 aftern.
First Quarter ..12th day	..45 m. past 6 morn.
Full Moon.....20th day	.. 1 m. past 9 morn.
Last Quarter ..27th day	.. 4 m. before 1 aftern.

M D	Ceres. declin.	Ceres. south.
	o ′	h. m.
1	13 N 24	5 m 31
9	13 36	5 7
17	13 44	4 42
25	13 49	4 16

M D	W D	Anniversaries, Holidays, Terms, &c.	Sun rises and sets.	Time on cl. at ☽'s noon	Sun's right ascension.	Sun's declin.	Moon ris. sets.	Moon south.
			h. m. h.	h. m. s.	h. m. s.	o ′	h. m.	h. m.
1	M	Giles	5 13 7	12 0 2	10 39 24	8 N 30	0 m 13	8 m 45
2	Tu	Lond. bur. 1666,	5 15 7	11 59 43	10 43 2	8 8	1 39	9 44
3	W	[O.S.	5 17 7	11 59 24	10 46 40	7 47	3 10	10 39
4	Th	.....	5 19 7	11 59 5	10 50 17	7 24	sets	11 32
5	F	.....	5 20 7	11 58 46	10 53 54	7 2	6 a 27	0 a 23
6	S	[Enurchus	5 22 7	11 58 26	10 57 31	6 40	6 45	1 12
7	☪	15 Sun.aft.Trin.	5 24 7	11 58 6	11 1 8	6 18	7 0	2 1
8	M	Nat. B. V. M.	5 26 7	11 57 46	11 4 44	5 55	7 21	2 50
9	Tu	.....	5 28 7	11 57 26	11 8 21	5 32	7 44	3 40
10	W	.....	5 30 7	11 57 5	11 11 57	5 10	8 16	4 32
11	Th	.....	5 32 7	11 56 45	11 15 33	4 47	8 56	5 23
12	F	.....	5 34 7	11 56 24	11 19 8	4 24	9 48	6 15
13	S	.....	5 36 7	11 56 3	11 22 44	4 1	10 47	7 6
14	☪	16 S.aft.Tr.Holy	5 38 7	11 55 42	11 26 20	3 38	11 55	7 54
15	M	[Cross	5 40 7	11 55 21	11 29 55	3 15	morn.	8 41
16	Tu	.....	5 42 7	11 55 0	11 33 30	2 52	1 6	9 27
17	W	Emb.W.Lamb.	5 44 7	11 54 39	11 37 6	2 29	2 17	10 10
18	Th	G. I. & H. land.	5 46 7	11 54 18	11 40 41	2 6	3 28	10 53
19	F	.....	5 48 7	11 53 57	11 44 16	1 42	4 39	11 37
20	S	.....	5 50 7	11 53 36	11 47 52	1 19	rises	morn.
21	☪	17 S.aft.Tr. St.	5 52 7	11 53 14	11 51 27	0 56	6 a 6	0 21
22	M	[Mat.	5 54 7	11 52 53	11 55 3	0 32	6 24	1 7
23	Tu	.....	5 56 7	11 52 33	11 58 38	0 9	6 48	1 56
24	W	.....	5 58 7	11 52 12	12 2 14	0 S 15	7 18	2 48
25	Th	.....	6 0 6	11 51 51	12 5 50	0 38	8 2	3 45
26	F	St. Cypr. Old	6 1 6	11 51 31	12 9 26	1 1	9 0	4 44
27	S	[Holy Rood	6 3 6	11 51 10	12 13 2	1 25	10 12	5 45
28	☪	18 Sun.aft.Trin.	6 5 6	11 50 50	12 16 39	1 48	11 31	6 45
29	M	St. Mic. Qu.	6 7 6	11 50 31	12 20 15	2 12	morn.	7 44
30	Tu	St. Jer. [Mart. b.	6 9 6	11 50 10	12 23 52	2 35	0 55	8 39

M D	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♄ declin.	♄ south.	♄ Mer. Alt. at London.	♅ declin.	♅ south.	♅ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	o ′
1	23 S 36	7 a 53	14 53	16 N 30	4 m 50	54 59	23 N 4	7 m 47	61 35
7	23 36	7 31	14 53	16 29	4 29	54 58	23 1	7 30	61 30
13	23 36	7 10	14 53	16 27	4 7	54 56	22 59	7 12	61 28
19	23 36	6 48	14 53	16 25	3 45	54 54	22 56	6 53	61 25
25	23 36	6 27	14 53	16 21	3 22	54 50	22 54	6 35	61 23

ASTRONOMICAL FACTS AND PHÆNOMENA.

M D	
2	☽ in perige.....14th, ☽ in apoge.....29th, ☽ in perige.
7	♄ stationary.
14	☿ in aphelio.
16	♅ stationary.....20th, ♀ stationary.
23	☉ enters ♎ 9h. 6m. P.M.
25	☿ elong. max.

M D	☽'s age.	Barom.	Therm.	Hygrom.	Winds. direct.	Winds. strength	Rain, depth of.	Miscellaneous Remarks.
1	26							
2	27							
3	28							
4	●							
5	1							
6	2							
7	3							
8	4							
9	5							
10	6							
11	7							
12	☽							
13	9							
14	10							
15	11							
16	12							
17	13							
18	14							
19	15							
20	○							
21	17							
22	18							
23	19							
24	20							
25	21							
26	22							
27	☾							
28	24							
29	25							
30	26							

M D	☌ declin.		☌ south.		☌ Mer. Alt. at London.		♀ declin.		♀ south.		♀ Mer. Alt. at London.		☿ declin.		☿ south.		☿ Mer. Alt. at London.	
	o	′	h.	m	o	′	o	′	h.	m.	o	′	o	′	h.	m.	o	′
1	21	N 41	9	m 18	60	10	11	S 43	2	a 23	26	46	2	N 1	1	a 5	40	30
7	20	58	9	12	59	27	13	41	2	11	24	48	2	S 21	1	16	36	8
13	20	10	9	6	58	39	15	15	1	56	23	14	6	25	1	24	32	4
19	19	17	9	0	57	46	16	16	1	36	22	13	10	5	1	30	28	24
25	18	21	8	53	56	50	16	37	1	11	21	52	13	11	1	32	25	18

LUNATIONS.

		M D	Ceres. declin.	Ceres. south.
			o ′	h. m.
New Moon	.... 4th day .. 41 m. past 8 morn.	1	13 N 49	3 m 55
First Quarter	..12th day .. 6 m. past 2 morn.	9	13 51	3 25
Full Moon	.....19th day .. 11 m. past 10 aftern.	17	13 51	2 54
Last Quarter	..26th day .. 44 m. past 7 aftern.	25	13 50	2 21

M D	W D	Anniversaries, Holidays, Terms, &c.	Sun rises and sets.	Time on cl. at ☉'s noon	Sun's right ascension.	Sun's declin.	Moon ris. sets.	Moon south.
			h. m. h.	h. m. s.	h. m. s.	o ′	h. m.	h. m.
1	W	Remigius	6 11 6	11 49 52	12 27 30	2 S 58	2 m 22	9 m 31
2	Th	.....	6 13 6	11 49 33	12 31 7	3 22	3 47	10 21
3	F	.....	6 15 6	11 49 14	12 34 45	3 45	5 6	11 10
4	S	.....	6 17 6	11 48 56	12 38 23	4 8	sets	11 59
5	ℭ	19 Sun. aft. Tr.	6 19 6	11 48 38	12 42 2	4 32	5 a 31	0 a 48
6	M	Faith	6 21 6	11 48 20	12 45 40	4 55	5 53	1 38
7	Tu	.....	6 23 6	11 48 3	12 49 20	5 18	6 22	2 29
8	W	.....	6 25 6	11 47 46	12 52 59	5 41	6 59	3 22
9	Th	St. Denys	6 27 6	11 47 30	12 56 39	6 4	7 48	4 15
10	F	Ox. & Ca. Ter. b	6 29 6	11 47 14	13 0 20	6 27	8 48	5 6
11	S	Old Mich. Day	6 31 6	11 46 58	13 4 1	6 49	9 54	5 55
12	ℭ	20 Sun. aft. Tr.	6 33 6	11 46 43	13 7 42	7 12	10 58	6 43
13	M	Tr. Edw. Conf.	6 35 6	11 46 28	13 11 24	7 35	morn.	7 29
14	Tu	.....	6 37 6	11 46 14	13 15 6	7 57	0 9	8 13
15	W	.....	6 39 6	11 46 0	13 18 49	8 20	1 21	8 56
16	Th	.....	6 41 6	11 45 47	13 22 32	8 42	2 32	9 38
17	F	Etheldred	6 42 6	11 45 34	13 26 16	9 4	3 40	10 22
18	S	St. Luke.....	6 44 6	11 45 22	13 30 1	9 26	4 59	11 8
19	ℭ	21 Sun. aft. Tr.	6 46 6	11 45 10	13 33 46	9 48	rises	11 57
20	M	.....	6 48 6	11 45 0	13 37 32	10 10	4 a 57	morn
21	Tu	.....	6 50 6	11 44 50	13 41 18	10 31	5 28	0 48
22	W	.....	6 52 6	11 44 41	13 45 5	10 53	6 9	1 45
23	Th	.....	6 54 6	11 44 32	13 48 53	11 14	7 1	2 44
24	F	.....	6 56 6	11 44 24	13 52 41	11 35	8 10	3 46
25	S	Crispin	6 58 6	11 44 16	13 56 30	11 56	9 29	4 47
26	ℭ	22 Sun. aft. Tr.	7 0 5	11 44 10	14 0 20	12 17	10 51	5 45
27	M	.....	7 2 5	11 44 4	14 4 11	12 37	morn.	6 41
28	Tu	St. Simon & St.	7 3 5	11 43 58	14 8 2	12 57	0 15	7 32
29	W	[Jude	7 5 5	11 43 54	14 11 54	13 13	1 36	8 22
30	Th	.....	7 7 5	11 43 50	14 15 47	13 38	2 56	9 9
31	F	.....	7 9 5	11 43 48	14 19 41	13 57	4 15	9 57

M D	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♄ declin.	♄ south.	♄ Mer. Alt. at London	♅ declin	♅ south.	♅ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m	o ′	o ′	h. m.	o ′
1	23 S 36	6 a 5	14 53	16 N 17	3 m 0	54 46	22 N 52	0 m 16	61 21
7	23 36	5 38	14 53	16 12	2 37	54 41	22 50	5 56	61 19
13	23 35	5 22	14 54	16 6	2 14	54 35	22 49	5 35	61 18
19	23 35	5 0	14 54	15 59	1 50	54 28	22 48	5 11	61 17
25	23 34	4 39	14 55	15 52	1 26	54 21	22 48	4 52	61 17

ASTRONOMICAL FACTS AND PHÆNOMENA.

MD	
8	☿ stationary.
10	Inferior conjunction ☉☿.
12	☽ in apoge;.....24th, ☽ in perige.
20	Inferior conjunction ☉☿.
24	☉ enters ♏ 5h. 19m. A.M.
28	♅ stationary;.....29th, ☿ stationary.

MD	☽'s age.	Barom.	Therm.	Hygrom.	Winds. direct.	Winds. strength	Rain, depth of.	Miscellaneous Remarks.
1	27							
2	28							
3	29							
4	●							
5	1							
6	2							
7	3							
8	4							
9	5							
10	6							
11	7							
12	☽							
13	☾							
14	10							
15	11							
16	12							
17	13							
18	14							
19	○							
20	16							
21	17							
22	18							
23	19							
24	20							
25	21							
26	☾							
27	23							
28	24							
29	25							
30	26							
31	27							

MD	♂ declin.	♂ south.	♂ Mer. Alt. at London.	♀ declin.	♀ south.	♀ Mer. Alt. at London.	☿ declin.	☿ south.	☿ Mer. Alt. at London.
	° ′	h. m.	° ′	° ′	h. m.	° ′	° ′	h. m.	° ′
1	17 N 22	8m 46	55 51	16 S 8	0 a 41	22 21	15 S 27	1 a 29	23 2
7	16 19	8 39	54 48	14 46	0 8	23 43	16 25	1 16	22 4
13	15 15	8 31	53 44	12 42	11 m33	25 47	15 19	0 48	23 10
19	14 9	8 22	52 37	10 20	11 1	28 9	11 40	0 4	26 49
25	13 0	8 13	51 29	8 8	10 33	30 21	7 26	11 m20	31 3

LUNATIONS.

		M D	Ceres. declin.	Ceres. south.
			o ′	h. m
New Moon	2d day .. 40 m. past 9 aftern.	1	13 N50	1 m48
First Quarter ..	10th day .. 52 m. past 10 aftern.	9	13 50	1 10
Full Moon.....	18th day .. 21 m. past 10 morn.	17	13 51	0 31
Last Quarter ..	25th day .. 33 m. past 3 morn.	25	13 54	11 a 45

M D	W D	Anniversaries, Holidays, Terms, &c.	Sun rises and sets.	Time on cl. at ☉'s noon	Sun's right ascension.	Sun's declin.	Moon ris. sets.	Moon south.
			h. m. h.	h. m. h.	h. m. s.	o ′	h. m.	h. m.
1	S	AllSaints[Souls	7 11 5	11 43 46	14 23 36	14 S 17	5 m33	10m 44
2	☪	23 S. af. Tr. All	7 13 5	11 43 45	14 27 31	14 36	sets	11 33
3	M	Prs. So. b. M. All	7 14 5	11 43 44	14 31 27	14 55	4 a 26	0 a 24
4	Tu	R. M. L. [S. 1 ret.	7 16 5	11 43 44	14 35 24	15 14	5 1	1 16
5	W	Powder Plot ...	7 18 5	11 43 46	14 39 22	15 32	5 45	2 8
6	Th	Mic. T. b. Leon.	7 20 5	11 43 48	14 43 20	15 51	6 38	3 0
7	F	....	7 21 5	11 43 51	14 47 20	16 9	7 40	3 51
8	S	Prs. Aug. So. bo.	7 23 5	11 43 54	14 51 20	16 27	8 47	4 39
9	☪	24 Sun. aft. Trin.	7 25 5	11 43 59	14 55 21	16 44	9 55	5 25
10	M	Ld. Mayor's day	7 26 5	11 44 4	14 59 23	17 1	11 4	6 8
11	Tu	St. Martin	7 28 5	11 44 10	15 3 26	17 18	morn.	6 51
12	W	Cam. T. d. m. M.	7 30 5	11 44 17	15 7 29	17 35	0 14	7 32
13	Th	Brit. [St. M. 2 r.	7 31 5	11 44 25	15 11 34	17 51	1 25	8 15
14	F	....	7 33 5	11 44 34	15 15 39	18 7	2 36	8 58
15	S	Machutus	7 35 5	11 44 43	15 19 45	18 23	3 51	9 45
16	☪	25 Sun. aft. Trin.	7 36 5	11 44 53	15 23 52	18 38	5 9	10 35
17	M	Hugh Bp. Lin.	7 38 5	11 45 5	15 28 0	18 53	6 31	11 30
18	Tu	In 8 days of St.	7 39 5	11 45 16	15 32 8	19 8	rises	morn.
19	W	[Mart. 3 ret.	7 41 5	11 45 29	15 36 17	19 22	4 a 49	0 30
20	Th	Edm. K. & Mar.	7 42 5	11 45 43	15 40 28	19 36	5 53	1 32
21	F	....	7 44 5	11 45 57	15 44 3.	19 50	7 9	2 35
22	S	Cecilia	7 45 5	11 46 13	15 48 51	20 3	8 33	3 36
23	☪	26 S. af. Tr. Clem.	7 46 5	11 46 29	15 53 3	20 16	9 57	4 34
24	M	[O. St. Mart.	7 48 5	11 46 46	15 57 17	20 28	11 19	5 27
25	Tu	Cath. In 15 d. St.	7 49 5	11 47 3	16 1 31	20 40	morn.	6 16
26	W	[Mart. 4 ret.	7 50 5	11 47 22	16 5 46	20 52	0 40	7 4
27	Th	. .....	7 52 5	11 47 41	16 10 2	21 4	1 59	7 50
28	F	Mich. Ter. ends	7 53 5	11 48 1	16 14 19	21 15	3 16	8 36
29	S	....	7 54 5	11 48 22	16 18 36	21 25	4 33	9 24
30	☪	Adv. Sun. St An.	7 55 5	11 48 43	16 22 54	21 35	5 49	10 12

M D	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♄ declin.	♄ south.	♄ Mer. Alt at London.	♅ declin.	♅ south.	♅ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	o ′
1	23 S 33	4 a 13	14 56	15 N 44	0 m 57	54 13	22 N 49	4m 26	61 18
7	23 32	3 50	14 57	15 36	0 31	54 5	22 50	4 2	61 19
13	23 31	3 27	14 58	15 28	0 5	53 57	22 52	3 36	61 21
19	23 30	3 4	14 59	15 22	11 a 54	53 51	22 54	3 10	61 23
25	23 29	2 40	15 0	15 15	11 7	53 44	22 57	2 43	61 26

ASTRONOMICAL FACTS AND PHÆNOMENA.

M D	
1	♀ stationary.....4th, ☿ elong. max.
9	☽ in apoge.....20th, ☽ in perige.
13	Opposition ☉ ♄.
21	Opposition ☉ ♃.
23	☉ enters ♐, 1h. 45m. A.M.

M D	☽'s age.	Barom.	Therm.	Hygrom.	Wind. direct.	Wind. strength	Rain, depth of.	Miscellaneous Remarks.
1	28							
2	●							
3	1							
4	2							
5	3							
6	4							
7	5							
8	6							
9	7							
10	☽							
11	9							
12	10							
13	11							
14	12							
15	13							
16	14							
17	15							
18	○							
19	17							
20	18							
21	19							
22	20							
23	21							
24	22							
25	☾							
26	24							
27	25							
28	26							
29	27							
30	28							

M D	♂ declin.	♂ south.	♂ Mer. Alt. at London.	♀ declin.	♀ south.	♀ Mer. Alt. at London.	☿ declin.	☿ south.	☿ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	o ′
1	11 N39	8 m 2	50 8	6 S 15	10m 4	32 14	6 S 2	10m 54	32 27
7	10 29	7 51	48 58	5 21	9 46	33 8	7 54	10 51	30 35
13	9 19	7 39	47 48	5 5	9 31	33 24	11 4	10 58	27 25
19	8 10	7 26	46 39	5 24	9 20	33 5	14 32	11 8	23 57
25	7 1	7 13	45 30	6 10	9 11	32 19	17 48	11 20	20 41

LUNATIONS.

		M D	Ceres. declin.	Ceres. south.
			o ′	h. m.
New Moon	2d day .. 36 m. past 1 aftern.	1	13 N59	11 a 14
First Quarter ..	10th day .. 56 m. past 6 aftern.	9	14 9	10 32
Full Moon.....	17th day .. 50 m. past 9 aftern.	17	14 23	9 51
Last Quarter ..	24th day .. 18 m. past 1 aftern.	25	14 41	9 10

M D	W D	Anniversaries, Holidays, Terms, &c.	Sun rises and sets.	Time on cl. at ☉'s noon.	Sun's right ascension.	Sun's declin.	Moon ris. sets.	Moon south.
			h. m. h.	h. m. s.	h. m. s.	o ′	h. m.	h. m.
1	M	.....	7 56 5	11 49 5	16 27 13	21 S 45	7 m 4	11m 3
2	Tu	.....	7 57 5	11 49 28	16 31 32	21 54	sets	11 54
3	W	.....	7 58 5	11 49 52	16 35 52	22 3	4 a 21	0 a 46
4	Th	.....	7 59 5	11 50 16	16 40 13	22 12	5 21	1 37
5	F	.....	8 0 4	11 50 40	16 44 34	22 20	6 27	2 26
6	S	Nicholas	8 1 4	11 51 5	16 48 56	22 28	7 34	3 12
7	☪	2 Sun. in Adv.	8 2 4	11 51 31	16 53 18	22 35	8 42	3 56
8	M	Concep.B.V.M.	8 3 4	11 51 57	16 57 41	22 41	9 51	4 38
9	Tu	.....	8 3 4	11 52 24	17 2 4	22 48	11 1	5 19
10	W	.....	8 4 4	11 52 51	17 6 28	22 54	morn.	6 0
11	Th	.....	8 4 4	11 53 18	17 10 52	22 59	0 9	6 41
12	F	.....	8 5 4	11 53 46	17 15 17	23 4	1 20	7 25
13	S	Lucy	8 5 4	11 54 14	17 19 41	23 8	2 34	8 12
14	☪	3 Sun. in Adv.	8 6 4	11 54 43	17 24 6	23 12	3 52	9 3
15	M	.....	8 6 4	11 55 12	17 28 32	23 16	5 14	10 0
16	Tu	Ca.T. e. O. Sap.	8 7 4	11 55 41	17 32 58	23 19	6 35	11 1
17	W	Ember W. Oxf.	8 7 4	11 56 10	17 37 23	23 22	rises	morn.
18	Th	[Term ends	8 7 4	11 56 39	17 41 49	23 24	4 a 38	0 5
19	F	.....	8 8 4	11 57 9	17 46 16	23 26	6 3	1 9
20	S	[Thomas	Shortest d. is at Lond. 7h.44m.17s.	11 57 39	17 50 42	23 27	7 23	2 10
21	☪	4 Sun. in Adv. St.		11 58 8	17 55 9	23 28	8 50	3 7
22	M	Shortest Day ..		11 58 38	17 59 35	23 28	10 16	3 59
23	Tu	.....		11 59 8	18 4 2	23 28	11 37	4 49
24	W	.....		11 59 39	18 8 29	23 27	morn.	5 36
25	Th	Christmas Day.	8 8 4	12 0 9	18 12 55	23 26	0 51	6 22
26	F	St. Stephen ...	8 7 4	12 0 39	18 17 22	23 24	2 10	7 9
27	S	St. John.....	8 7 4	12 1 8	18 21 48	23 22	3 25	7 57
28	☪	1 S. af. Chr. H.	8 7 4	12 1 38	18 26 15	23 20	4 41	8 46
29	M	[Innocents	8 7 4	12 2 8	18 30 41	23 17	5 49	9 37
30	Tu	.....	8 6 4	12 2 37	18 35 7	23 13	6 49	10 28
31	W	Silvester	8 6 4	12 3 6	18 39 33	23 9	7 38	11 19

M D	☿ declin.	☿ south.	☿ Mer. Alt. at London.	♄ declin.	♄ south.	♄ Mer. Alt. at London.	♅ declin.	♅ south.	♅ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	o ′
1	23 S 27	2 a 15	15 2	15 N 8	10 a 40	53 37	23 N 0	2 m16	61 29
7	23 26	1 50	15 3	15 2	10 12	53 31	23 3	1 47	61 32
13	23 25	1 26	15 4	14 57	9 44	53 26	23 7	1 17	61 36
19	23 23	1 0	15 6	14 52	9 16	53 21	23 10	0 48	61 39
25	23 20	0 35	15 9	14 49	8 48	53 18	23 14	0 18	61 4:

ASTRONOMICAL FACTS AND PHÆNOMENA.

M D	
6	☽ in apoge.....18th, ☽ in perige.
11	☿ in aphelio.....13th, superior conjunction ☉☿.
19	♀ elong. max.; ♀ in perihelio.
22	☉ enters ♑, 2h. 14m. P.M.
28	Opposition ☉♃.

M D	☽'s age.	Barom.	Therm.	Hygrom.	Wind. direct.	Wind. strength	Rain. depth of.	Miscellaneous Remarks.
1	29							
2	●							
3	1							
4	2							
5	3							
6	4							
7	5							
8	6							
9	7							
10	☽							
11	9							
12	10							
13	11							
14	12							
15	13							
16	14							
17	○							
18	16							
19	17							
20	18							
21	19							
22	20							
23	21							
24	☾							
25	23							
26	24							
27	25							
28	26							
29	27							
30	28							
31	29							

M D	♂ declin.	♂ south.	♂ Mer. Alt. at London.	♀ declin.	♀ south.	♀ Mer. Alt. at London.	☿ declin.	☿ south.	☿ Mer. Alt. at London.
	o ′	h. m.	o ′	o ′	h. m.	o ′	o ′	h. m.	′
1	5 N 54	6 m 59	44 23	7 S 18	9 m 4	31 11	20 S 37	11 m 32	17 52
7	4 49	6 44	43 18	8 43	8 59	29 46	22 52	11 46	15 37
13	3 47	6 28	42 16	10 18	8 53	28 11	24 25	0 a 2	14 4
19	2 48	6 11	41 17	12 0	8 50	26 29	25 13	0 15	13 16
25	1 51	5 54	40 20	13 43	8 46	24 46	25 9	0 31	13 20

ECLIPSES, &c. IN 1823.

I. *January* 12, an eclipse of the SUN, invisible at Greenwich; the conjunction takes place at 8h. 54m. A.M.

II. *January* 26, an eclipse of the MOON, partly visible at Greenwich. Eclipse begins 3h. 25m. P.M. ☽ rises 4h. 19m. Total darkness begins 4h. 22½m. Middle of eclipse 5h. 11½m. End of total darkness 6h. 0½m. End of eclipse 6h. 58m. P.M. Digits eclipsed 20d 48′.

III. *February* 11, a solar eclipse, invisible at Greenwich; the conjunction takes place at 3h. 4m. A.M.

IV. *July* 8, a small solar eclipse, visible here. Begins 5h. 13¾m. A.M. ☽ first impression 30½° on left hand ☉'s vertex. Middle of eclipse 5h. 27m. End 5h. 40½m. Digits eclipsed 0d 21½′.

V. *July* 23, an eclipse of the MOON, partly visible at Greenwich. Begins 1h. 30m. A.M. Total darkness begins 2h. 36⅔m. Middle 3h. 26m. Moon sets totally eclipsed 4h. 10m. End of eclipse 5h. 22m. Digits eclipsed 18d 12′.

VI. *August* 6, a solar eclipse, invisible at Greenwich; the conjunction is at 1h. 53m. P.M.

*** SATURN'S Ring will be very finely seen with good telescopes for several weeks before and after his opposition on the 13th of November.

††† MERCURY may best be observed about Feb. 4, May 28, Nov. 4, in the evenings; and March 16, July 16, and Sept. 25, in the mornings.

JUPITER will be an *Evening Star* till June 10th, then a *Morning Star* till the year's end.

VENUS will be an *Evening Star* till October 10th, then a *Morning Star* till the end of the year.

BIRTH-DAYS OF THE ROYAL FAMILY.

KING GEORGE IV. *w.* 12 Aug. 1762.

Duke of York, *w*.....Aug. 16, 1763	D. of Cumberl. *m*...June 5, 1771
Duke of Clar. *m*.....Aug. 21, 1765	Duke of Sussex.....Jan. 27, 1773
Qu. of Wirtemb. *w*..Sept. 29, 1766	D. of Cambridge, *m*..Feb. 24, 1774
Prs. Augusta Sophia. Nov. 8, 1768	Dss. of Gloucester..April 25, 1776
Prs. Hesse Homb.....May 22, 1770	Princess Sophia.....Nov. 3, 1777

Duke of Gloucester..Jan. 15, 1776	Dss. of Cumberl....Mar. 20, 1778
Duchess of Clarence. Aug. 13, 1792	Dss. of Cambridge..July 25, 1797
Duchess of Kent, *w*..Aug. 17, 1786	Prs. Sophia of Glou..May 23, 1773

JEWISH CALENDAR.

The 5583d Jewish year ends September 5, 1823.

1823.

..10th of *Thebeth*, a Fast. (Vid. 2 Kings, xxvi.)

Jan. 13...1st of *Shebat*.

27...15th do. a Festival.

1823.
Feb. 12... 1st of *Adar*.
24...13th do. Fast of Esther. (Vid. Esther, iv. 16.)
25...14th Purim.
26...15th Shushan Purim.
Mar. 13... 1st of *Nisan*.
27...15th do. Passover.
28...16th do. Morrow of Passover.
April 2...21st do. 7th Day of the Feast.
3...22d do. Passover ends.
12... 1st of *Jyar*.
29...18th do. School feast.
May 11... 1st of *Sivan*.
16... 6th do. Pentecost.
17... 7th do. Feast of Weeks.
June 10... 1st of *Thammuz*.
26...17th do. A Fast, because of the ceasing of perpetual sacrifice; also on account of breaking the tables of stone. (Exod. xxxii. 19.)
July 9... 1st of *Ab*.
17... 9th do. Fast, on account of burning the Temple. (Vid. also Num. xiv. 29. 31.) *Black* Fast.
23...15th of do. A Festival.
Aug. 8... 1st of *Elul*.
Sept. 6... 1st of *Tisri*. Year 5584 begins.
7... 2d do. New-year's Feast.
8... 3d do. Fast of Gedaliah. (Vid. 2 Kings, xxv. 25.)
15...10th do. Fast of Expiation. (Lev. xxiii. 27.) *White* Fast.
20...15th of *Tisri*, Feast of Tabernacles. (Lev. xxiii. 34.)
26...21st do. Hosanna Rabba, the Feast of Branches.
27...22d do. Feast Tab. ends. (Lev. xxiii. 36.)
28...23d do. Feast of the Law. (1 Kings, viii. 65.)
Oct. 6... 1st of *Marchesvan*.
Nov. 4... 1st of *Chisleu*.
10... 7th do. A Fast. (Jerem. xxxvi. 23.)
28...25th do. Dedication of Temple.
Dec. 3... 1st of *Thebeth*.
12...10th do. A Fast, on account of the event recorded, 2 Kings, xxv.

MAHOMETAN CALENDAR.

Employed in Turkey, Persia, Arabia, Egypt, &c.

Year 1238 of the Hegira, began Sept. 18, 1822; ends Sept. 7, 1823.

1823.		1823.	
Jan.	14. 1st day of .. *Jomada* I.	Aug.	9. 1st day of .. *Dulheggia*.
Feb.	13..... *Jomada* II.	Sept.	7..... *Muharram*.
March	14..... *Rajab*.		
April	13..... *Shaaban*.		Year 1239.
May	12..... *Ramadan*.	Oct.	7..... *Saphar*.
June	11..... *Shawall*.	Nov.	5..... *Rabia* I.
July	10..... *Dulkaäda*.	Dec.	5..... *Rabia* II.

TABLE OF THE PRINCIPAL ELEMENTS OF THE SOLAR SYSTEM.

Names of the Planets.	Time of the Sideral Revolutions.	Mean distance from the Sun.
	Days.	
Mercury ☿	87·969	0·387
Venus ♀	224·701	0·723
The Earth ⊕	365·256	1·000
Mars ♂	686·980	1·524
Jupiter ♃	4332·596	5·203
Saturn ♄	10758·970	9·539
Uranus ♅	30088·713	19·183
Ceres ⚳	1681·559	2·767
Pallas ⚴	1681·709	2·768
Juno ⚵	1590·998	2·667
Vesta ⚶	1335·205	2·373

Diameters, that of the Earth being 1.	Volumes, that of the Earth being 1.	Time of Rotation in Days.	Masses of the Planets, that of the Sun being 1.
		Days.	
The Sun ..... 109·93	1328460	25 500	1
Mercury ..... 0·39	0·1	1·000	$\frac{1}{2025800}$
Venus ..... 0·97	0·9	0·973	$\frac{1}{356600}$
The Earth .... 1·00	1·0	0·997	$\frac{1}{337100}$
Mars..... 0·56	0·2	1·027	$\frac{1}{2546300}$
Jupiter ..... 11·56	1470·2	0·414	$\frac{1}{1071}$
Saturn ..... 9·61	887·3	0·428	$\frac{1}{3512}$
Uranus ..... 4·26	77·5	.....	$\frac{1}{17919}$
The Moon..... 0·27	$\frac{1}{49}$	27·322	$\frac{1}{23090000}$

N.B.—The mean diameter of the Earth being 7960 miles, and its mean distance from the Sun 95,000,000, the diameters and distances of the other Planets may readily be found.

Satellites of Jupiter.

Mean distance, the diameter of the Planet being 1.	Time of revolution in Days.	Masses of the Satellites, that of the Planet being taken for unity.
	Days.	
1st Satellite ..... 5·8130	1·7691	0·000017
2d Satellite ..... 9·2487	3·5512	0·000023
3d Satellite .....14·7524	7·1546	0·000089
4th Satellite .....25·9469	16·6388	0·000043

Satellites of Saturn.

Mean distance, the diameter of the Planet being 1.	Time of revolution in Days.
	Days.
1st Satellite ..... 3·08	0·943
2d Satellite ..... 3·95	1·370
3d Satellite ..... 4·89	1·888
4th Satellite ..... 6·27	2·739
5th Satellite ..... 8·75	4·517
6th Satellite ..... 20·30	15·945
7th Satellite ..... 59·18	79·330

Satellites of Uranus.

Mean distance, the diameter of the Planet being 1.	Time of revolution in Days.
	Days.
1st Satellite ..... 13·12	5·893
2d Satellite ..... 17·02	8·707
3d Satellite ..... 19·85	10·961
4th Satellite ..... 22·75	13·456
5th Satellite ..... 45·51	38·075
6th Satellite ..... 91·01	107·694

TERRESTRIAL LATITUDES AND LONGITUDES.

Name of the Place.	Latitude.				Longitude from Greenwich.			
Aberdeen	57°	9′	0″	N	2°	9′	0″	W
Agen	44	12	7	N	0	35	49	E
Ajjaccio	41	55	1	N	8	43	49	E
Aleppo	36	11	25	N	37	20	0	E
Alexandria	31	13	5	N	30	16	30	E
Algiers	36	48	36	N	2	12	45	E
Amiens	49	53	41	N	2	17	56	E
Amsterdam	52	22	17	N	4	45	30	E
Angers	47	28	8	N	0	33	52	W
Angoulême	45	39	3	N	0	8	45	E
Antongil	15	27	23	S	50	23	15	E
Aurillac	44	55	41	N	2	27	0	W
Antwerp	51	13	16	N	4	22	45	E
Archangel	64	33	36	N	38	55	0	E
Astrakan	46	21	12	N	48	2	30	E
Athens	37	58	1	N	23	52	30	E
Auch	43	38	46	N	0	34	36	E
Auxerre	47	47	64	N	3	34	20	E
Avignon	43	57	8	N	4	48	33	E
Bagdad	33	19	40	N	43	46	30	E
Barcelona	41	21	45	N	2	13	0	E
Batavia	6	12	0	S	106	51	15	E
Bauvais	49	26	2	N	2	4	42	E
Berlin	52	31	17	N	13	22	0	E
Blois	47	35	19	N	1	19	50	E
Bombay	18	56	40	N	72	38	0	E
Bordeaux	44	50	14	N	0	34	49	W
Boston (America)	42	21	11	N	70	37	15	W
Bourg	46	12	31	N	5	13	55	E
Bourges	47	4	58	N	2	23	26	E
Bremen	53	4	32	N	8	47	15	E
Breslaw	51	6	30	N	17	8	45	E
Brest	48	23	14	N	4	30	50	W
Brussels	50	50	59	N	4	21	45	E
Buenos-Ayres	34	35	26	S	58	31	15	W
Bukarest	44	26	45	N	26	8	0	E
Bristol	51	27	6	N	2	35	29	W
Cadiz	36	32	0	N	6	11	50	W
Caen	49	11	10	N	0	21	47	W
Caire (le)	30	2	21	N	31	18	30	W
Cambridge	52	12	36	N	0	4	15	E
Canton	23	8	9	N	113	2	15	E
Cape Français	19	46	20	N	72	18	10	W
Cape of Good Hope	33	55	15	S	18	23	45	E
Carcassonne	43	12	51	N	2	19	11	E
Carthagèna	10	25	18	N	75	26	45	W
Cassel	51	19	20	N	9	29	0	E
Calcutta	22	34	45	N	88	29	30	E

Name of the Place.	Latitude.				Longitude from Greenwich.			
Cayenne	4°	56′	15″	N	52°	15	0″	W
Châlons	48	57	12	N	4	22	12	E
Chandernagor	22	51	26	N	88	29	15	E
Chartres	48	26	49	N	1	28	55	E
Chaumont	48	6	13	N	5	10	0	E
Cherbourg	49	38	31	N	1	38	11	W
Clermont—Ferrant	45	46	45	N	3	5	7	E
Constantinople	41	1	27	N	28	53	49	E
Copenhagen	55	41	4	N	12	35	15	E
Cracow	50	3	5	N	19	55	45	E
Dantzick	54	20	48	N	18	33	37	E
Dresden	51	2	50	N	13	42	46	E
Digne	44	5	18	N	6	14	4	E
Dover	51	7	47	N	1	18	30	E
Draguignan	43	32	18	N	6	28	18	E
Dublin	53	21	11	N	6	6	30	W
Dunkirk	51	2	10	N	2	22	23	E
Edinburgh	55	57	57	N	3	12	15	W
Evreux	49	1	24	N	1	8	39	E
Falmouth	50	8	0	N	5	2	30	W
Florence	43	46	30	N	11	2	0	E
Foix	42	57	45	N	1	36	7	E
Foulpointe	17	40	14	S	49	53	0	E
Frankfort on the Maine	50	7	29	N	18	35	45	E
Gap	44	33	50	N	6	4	57	E
Geneva	46	12	0	N	6	0	0	E
Genes	44	25	0	N	8	35	45	E
Gibraltar	36	6	30	N	5	22	0	W
Goa	15	31	0	N	73	45	0	E
Gotha	50	56	8	N	10	43	45	E
Grenoble	45	11	49	N	5	43	40	E
Greenwich	51	28	40	N	0	0	0	
Hamburgh	53	34	30	N	9	50	0	E
Havannah	23	9	27	N	82	18	30	W
Horn (Cape)	55	58	30	S	67	26	0	W
Irkutsk	52	16	41	N	104	11	15	E
Ispahan	32	24	34	N	52	50	0	E
Jackson (Port)	33	52	20	S	151	14	30	E
Jakutskoi	62	1	50	N	129	47	45	E
Jerusalem	31	46	34	N	35	20	0	E
Kasan	55	43	58	N	49	29	30	E
Kœnigsberg	54	42	12	N	20	29	0	E
Laon	49	33	52	N	3	37	29	E
La Rochelle	46	0	21	N	1	9	55	W
Laval	48	4	14	N	0	46	38	W
Le-Mans	48	0	30	N	0	11	20	W
Lille	50	37	50	N	3	4	16	E
Lima	12	2	45	S	76	49	30	W
Limoges	45	49	53	N	1	15	9	E
Lepuy	45	2	41	N	3	52	46	E

Name of the Place.	Latitude.				Longitude from Greenwich.			
Lisbon	38°	42′	18″	N	9°	9′	59″	W
Liverpool	53	22	0	N	2	56	45	W
London (St. Paul's)	51	30	49	N	0	5	37	W
Lyons	45	45	52	N	4	49	43	E
Lynn	52	46	52	N	10	25	4	E
Macao	22	12	44	N	113	46	15	E
Macon	46	18	27	N	4	49	53	E
Madras	13	4	54	N	80	28	45	E
Madrid	40	24	57	N	3	25	45	W
Malacca	2	12	0	N	102	5	0	E
Manilla	14	36	8	N	120	53	24	E
Marseilles	43	17	49	N	5	22	8	E
Mecca	21	28	9	N	40	14	25	E
Melun	48	32	23	N	2	39	23	E
Metz	49	7	5	N	6	11	0	E
Mexico	19	25	57	N	100	5	45	W
Mézières	49	45	47	N	4	43	16	E
Milan	45	27	59	N	9	10	0	E
Montauban	44	0	55	N	1	20	30	W
Montpellier	43	36	33	N	3	52	44	E
Monterey	36	35	30	N	121	42	0	W
Montevideo	34	54	48	S	56	14	45	W
Moscow	55	45	45	N	37	45	45	E
Moulins	46	34	4	N	3	19	59	E
Munich	48	8	20	N	11	30	0	E
Nancy	48	41	28	N	6	11	33	E
Nangasaki	32	45	5	N	128	46	15	E
Nankin	32	4	40	N	118	47	0	E
Naples	40	50	15	N	14	13	45	E
Nevers	46	59	13	N	3	9	25	E
Nismes	43	50	35	N	4	21	11	E
Newcastle	55	3	0	N	1	27	0	W
Norwick	52	40	0	N	1	20	0	E
New Orleans	29	57	45	N	89	58	45	W
Odessa	46	29	30	N	30	37	35	E
Orléans	47	54	4	N	1	54	22	E
Oxford	51	45	40	N	1	15	30	W
Owyhee	20	17	0	N	155	59	0	W
Palermo	38	6	45	N	13	21	45	E
Palma	39	54	13	N	2	39	0	E
Paris	48	50	14	N	2	20	0	E
Pekin	39	54	4	N	116	24	15	E
Perigreux	45	11	10	N	0	43	1	E
Perpignan	42	41	55	N	2	54	55	E
Petersburgh	59	56	23	N	30	19	15	E
Philadelphia	39	56	55	N	75	13	30	W
Pondicherry	11	55	41	N	79	52	45	E
Porto-Ferajo	42	49	6	N	10	19	20	E
Porto-Rico	18	29	10	N	66	13	30	W

Name of the Place.	Latitude.				Longitude from Greenwich.			
Portsmouth	50°	47′	5″	N	1°	6′	15″	W
Plymouth	50	22	24	N	4	15	38	W
Poictiers	46	35	0	N	0	20	5	E
Prague	50	5	19	N	14	45	0	E
Quebec	46	47	30	N	69	53	0	W
Quimper	47	58	24	N	4	7	25	W
Quito	0	13	17	S	77	55	0	W
Rennes	48	6	45	N	1	41	53	W
Riga	56	57	0	N	24	5	0	E
Rio-Janeiro	22	54	2	S	42	43	45	W
Rome	41	53	54	N	12	28	0	E
Rouen	49	26	27	N	1	5	20	W
St. Joseph	23	3	42	N	109	42	30	W
St. Lo	49	6	57	N	1	5	53	W
St. Helena	15	55	0	S	5	49	0	W
St. Croix	17	44	8	N	64	48	44	W
Siam	14	20	40	N	100	50	0	E.
Smolensko	54	51	0	N	32	0	0	E
Smyrna	38	28	7	N	27	19	45	E
Stockholm	59	20	31	N	18	3	55	E
Stralsund	54	19	0	N	13	32	0	E
Strasbourg	48	34	56	N	7	46	18	E
Stuttgardt	48	46	15	N	9	10	45	E
Syene	24	5	23	N	32	54	19	E
Taiti	17	29	17	S	149	30	30	W
Teneriffe (Peak of)	28	17	0	N	16	29	24	W
Thebes	25	43	0	N	32	39	6	E
Tobolski	58	11	42	N	68	12	45	E
Tornea	65	50	50	N	24	12	0	E
Toulon	43	7	9	N	5	56	35	E
Toulouse	43	35	54	N	1	21	3	E
Tours	47	23	44	N	0	41	11	E
Trebisonde	41	2	41	N	39	36	15	E
Trieste	45	38	8	N	13	46	23	E
Trincomalee	8	32	0	N	81	12	0	E
Tripoli	36	47	59	N	13	5	15	E
Tunis	32	53	40	N	5	31	0	W
Turin	45	4	14	N	7	40	0	E
Uraniburgh	55	54	38	N	12	42	44	E
Valence	44	55	59	N	4	53	10	E
Vannes	47	39	14	N	2	46	26	W
Venice	45	25	32	N	12	4	30	E
Versailles	48	48	18	N	2	7	10	E
Vienna	48	12	40	N	16	22	30	E
Warsaw	52	14	0	N	21	0	30	E
Washington	38	53	0	N	16	22	30	E
Wardhus	70	22	36	N	31	6	45	E
Wilna	54	41	2	N	25	27	30	E
Yarmouth	52	36	40	N	1	43	35	E

GENERAL SURVEY OF THE EARTH:

Including, more especially, a Synopsis of Europe.

The surface of the Earth contains 198,956,786 square miles. Above two-thirds of this is covered with water. The seas and unknown parts are computed at 159,966,217 square miles; the inhabited parts at 38,990,569 miles:—Of these,

Europe contains	3,365,836
Asia	10,868,823
Africa	9,854,807
America	14,901,103

And these parts are peopled by about 760,000,000 human beings; of whom,

Asia contains	500,000,000
Europe	208,875,000
Africa	30,000,000
America	20,000,000
Austral-Asia, Polynesia, and Isles of the Pacific Ocean	800,000

European Countries.		Population.	Squ. Miles.	Religion.	Governmt.
British Domin.	England	11,978,875	57,960	Prot.	Mix. M.
	Scotland	2,093,456	27,794	do.	do.
	Ireland	6,500,000	30,370	do.	do.
Denmark		1,640,000	51,000	do.	Monarc.
Sweden and Norway		3,500,000	380,312	do.	do.
Russia		42,400,000	1,600,000	Gr. C.	Despot.
Poland		8,000,000	160,800	Cath.	Monarc.
Austria		28,178,800	148,604		Emp.
Prussia		10,700,000	56,416	do.	
German States.	Bavaria	3,560,000	62,970	P. and C.	M. and Ar.
	Saxony	1,200,000			
	Hanover	1,303,000			
	Wirtemberg	1,395,500			
	Smaller States	5,225,000			
Switzerland		1,720,000	16,960	do.	Repub.
Netherlands		5,263,000	24,520	Prot.	Monarc.
France		30,408,000	204,000	Cath.	do.
Spain		10,400,000	180,763	do.	do.
Portugal		3,684,000	41,000	do.	do.
Italian States.	Austrian States	4,352,700	116,967	do.	do.
	Kingd. of Sardinia	3,000,000			
	States of the Church	1,250,000			
	K. of the two Sicilies	5,400,000			
	Smaller States	2,000,000			
Turkey		8,500,000	181,400	Mahom.	Despot.
Ionian Isles		5,230,000	24,000		

TABLE OF POPULATION THROUGHOUT THE LAST CENTURY.

England and Wales.

	Population.		Population.
In the Year 1700....	5,475,000	In the Year 1760....	6,736,000
1710....	5,240,000	1770....	7,428,000
1720....	5,565,000	1780....	7,953,000
1730....	5,796,000	1790....	8,675,000
1740....	6,064,000	1801....	9,168,000
1750....	6,467,000		

COMPARATIVE SUMMARY OF THE ENUMERATIONS OF 1801, 1811, AND 1821.

	Population, 1801.	Rate of Increase p. ce.	Rate of Diminution p.cent	Population, 1811.	Rate of Increase p. ce.	Rate of Diminution p.cent.	Population, 1821.
England	8,331,431	14½	..	9,538,827	18	..	11,261,437
Wales	541,546	13	..	611,788	17⅕	..	717,438
Scotland	1,599,068	13	..	1,805,688	15⅔	..	2,093,456
	10,472,048	14	..	11,956,303	17⅔	..	14,072,331
Army, Navy, &c.	470,598	36	..	640,500	..	50	319,300
Totals	10,942,646	15	..	12,596.803	14¼	..	14,391 631

The following Formulæ for Logarithmic Computation will serve to shew how nearly the actual increase of Population accords with the laws of Geometrical Progression. Let P denote the population at any assigned time, Π the population after n years, $\frac{1}{a}$ the proportional annual augmentation, as $\frac{1}{50}$th, $\frac{1}{90}$th, &c. Then,

1. $\log. \Pi = \log. P + n \log. \left(1+\frac{1}{a}\right)$ 2. $\log. P = \log. \Pi - n \log. \left(1+\frac{1}{a}\right)$

3. $n = \frac{\log. \Pi - \log. P}{\log. \left(1+\frac{1}{a}\right)}$ 4. $\log. \left(1+\frac{1}{a}\right) = \frac{\log. \Pi - \log. P}{n}$

5. $n' = \frac{\log. m}{\log. \left(1+\frac{1}{a}\right)}$: a theorem for determining the period n' in which the population would be increased m times.

6. $\log. \left(1+\frac{1}{a}\right) = \frac{\log. m}{n}$: a theorem for finding the annual rate $\left(\frac{1}{a}\right)$ by which the population would be increased m times in n years.

COMPARATIVE STATEMENT OF THE NUMBERS OF PERSONS BETWEEN DIFFERENT AGES,

Supposing the Total Number in each Country or Place to be Ten Thousand.

	England.		London.		Wales.		Scotland.	
	Males.	Femal.	Males.	Femal.	Males.	Femal.	Males.	Femal.
Under 5 years	1538	1444	1397	1216	1514	1382	1494	1294
Between 5 & 10	1343	1268	1095	995	1407	1281	1357	1177
10 & 15	1169	1056	935	834	1210	1093	1247	1057
15 & 20	988	995	865	959	1009	1003	1032	1043
20 & 30	1471	1684	1718	2062	1433	1560	1490	1769
30 & 40	1155	1210	1548	1567	1109	1163	1095	1204
40 & 50	941.0	932.6	1203.9	1092.4	871.4	911.6	895.4	937.9
50 & 60	665.6	653.3	730.7	690.9	646.3	672.6	649.9	711.6
60 & 70	447.6	458.0	353.6	388.8	474.8	535.5	458.1	502.2
70 & 80	221.9	228.2	128 5	156.4	243.6	281.4	216.3	225 5
80 & 90	56.25	64.8.	22.47	34.64	74.09	104.76	58.22	65.18
90 & 100	4.15	5.75	1.69	3.93	7.54	10.95	6.71	7.42
100 & upwards.	.12	.22	.21	.32	.09	.50	.43	.60

The greatest proportional number of persons living, between 80 and 100, of any county in England, is in *Herefordshire:* the next greatest number, in the bishopric of *Durham.*

The greatest proportional number of persons living between 70 and 80, of any county in Scotland, is in the county of *Nairn:* the next greatest number in *Orkney* and *Shetland.*

The greatest proportional number living between 40 and 50, is in *Middlesex.*

POPULATION, &c. OF GREAT BRITAIN.

ENGLAND.

Counties of	Population. I. 1700.	II. 1750.	III. 1801.	Increase per cent.	IV. 1811.	Increase per cent.	V. 1821.
Bedford	48,500	53,900	65,500	11	72,600	18	85,400
Berks	74,700	92,700	112,800	8	122,300	10	134,700
Buckingham	80,500	90,700	111,000	10	121,600	13	136,800
Cambridge..	76,000	72,000	92,300	13	104,500	19	124,400
Chester	107,000	131,600	198,100	18	234,600	17	275,500
Cornwall....	105,800	135,000	194,500	15	223,900	17	262,600
Cumberland	62,300	86,900	121,100	14	138,300	15	159,300
Derby	93,800	109,500	166,500	15	191,700	13	217,600
Devon.....	248,200	272,200	354,400	12	396,100	13	447,900
Dorset.....	90,000	96,400	119,100	8	128,900	14	147,400
Durham	95,500	135,000	165,700	11	183,600	15	211,900
Essex	159,200	167,800	234,000	11	260,900	13	295,300
Gloucester..	155,200	207,800	259,100	14	295,100	16	342,600
Hereford ..	60,900	74,100	92,100	6	97,300	8	105,300
Hertford....	70,500	86,500	100,800	14	115,400	15	132,400
Huntingdon	34,700	32,500	38,800	13	43,700	14	49,800
Kent	153,800	190,000	317,800	21	385,600	13	434,600
Lancaster ..	166,200	297,400	695,100	23	856,000	25	1,074,000
Leicester ..	80,000	95,000	134,400	15	155,100	15	178,100
Lincoln	180,000	160,200	215,500	14	245,900	17	288,800
Middlesex ..	624,200	641,500	845,400	17	985,100	19	1,167,500
Monmouth ..	39,700	40,600	47,100	36	64,200	13	72,300
Norfolk	210,200	215,100	282,400	7	301,800	16	351,300
Northampton	119,500	120,300	136,100	7	146,100	13	165,800
Northumberl.	118,000	141,700	162,300	10	177,900	14	203,000
Nottingham	65,200	77,600	145,000	16	168,400	13	190,700
Oxford	79,000	92,400	113,200	9	123 200	13	139,800
Rutland	16,600	13,800	16,900	1	17,000	11	18,900
Salop(Shrop.)	101,600	130,300	172,200	17	200,800	5	210,300
Somerset....	195,900	224,500	282,800	11	313,300	16	362,500
South.(Ham.)	118,700	137,500	226,900	12	253,300	14	289,000
Stafford	117,200	160,000	247,100	23	304,000	14	347,900
Suffolk	152,700	156,800	217,400	12	242,900	14	276,000
Surrey.....	154,900	207,100	278,000	20	334,700	22	406,700
Sussex.....	91,400	107,400	164,600	19	196,500	21	237,700
Warwick ..	96,600	140,000	215,100	10	236,400	18	280,000
Westmorel.	28,600	36,300	43,000	10	47,530	10	52,400
Wilts	153,900	168,400	191,200	5	200,300	13	226,600
Worcester ..	88,200	108,000	143,900	15	165,900	13	188,200
York, E. Rid.	96,200	85,500	144,000	20	173,000	12	194,300
—— N. Rid.	98,600	117,200	160,500	7	171,100	10	187,400
—— W. Rid.	236,700	361,500	582,700	16	675,100	21	815,400
England	5,108,500	6,017,700	8,609,000	14¾	9,870,300	16⅝	11,486,700
Wales	366,500	449,300	559,000	13	632,200	15⅝	731,800
	5,475,000	6,467,000	9,168,000	14½	10,502,500	16⅓	12,218.500

ENGLAND.

Counties of	VI. Area in square miles (Engl.)	VII. Divisional meetings or petty sessions.	VIII. Acting county magistrates.	IX. Number of parishes.	X. Number of population returns, 1821.	XI. No. of parish register returns, 1821.	XII. Annual propor.		
							1 bap-tism to	1 bur. to	1 mar-riage to
Bedford	463	6	41	123	147	128	36	62	131
Berks	756	9	93	151	230	160	34	58	145
Buckingham	740	10	136	202	240	206	35	56	144
Cambridge ..	858	11	83	167	176	175	32	58	126
Chester	1,052	8	69	90	504	128	36	55	136
Cornwall....	1,327	16	99	203	218	205	34	71	151
Cumberland	1,478	5	55	104	302	137	34	58	154
Derby	1,026	6	54	139	337	188	35	63	153
Devon	2,579	20	167	465	487	472	32	61	127
Dorset.....	1,005	9	63	271	309	267	36	66	154
Durham	1,061	16	74	75	302	99	34	55	143
Essex	1,532	14	188	406	431	403	35	59	150
Gloucester ..	1,256	18	179	339	439	341	37	64	119
Hereford....	860	12	136	219	281	225	38	63	170
Hertford....	528	12	95	132	150	132	34	58	179
Huntingdon	370	3	22	103	107	98	35	63	132
Kent	1,537	14	168	411	446	402	31	50	130
Lancaster ..	1,831	16	100	70	464	203	32	55	126
Leicester ..	804	6	52	216	348	259	36	59	133
Lincoln	2,748	16	110	629	745	623	32	62	138
Middlesex ..	282	13	200	197	239	201	38	47	106
Monmouth ..	498	10	39	125	158	127	47	70	154
Norfolk	2,092	33	154	731	751	694	33	61	136
Northampton	1,017	9	79	306	346	298	36	58	134
Northumberl.	1,871	7	43	88	534	100	38	58	145
Nottingham	837	10	58	212	269	217	33	58	133
Oxford	752	13	59	217	307	236	35	61	153
Rutland	149	1	7	52	56	50	36	62	148
Salop(Shrop.)	1,341	11	109	216	308	234	35	58	155
Somerset....	1,642	16	130	475	517	479	37	63	149
South.(Ham.)	1,628	11	110	298	349	311	32	58	117
Stafford	1,143	8	62	145	350	180	32	56	128
Suffolk.....	1,512	16	110	510	523	502	35	67	139
Surrey.....	758	11	165	142	161	144	40	52	148
Sussex.....	1,463	16	134	310	329	302	33	72	151
Warwick....	902	14	61	205	265	209	37	52	123
Westmorel.	763	4	32	32	121	68	35	58	155
Wilts	1,379	16	91	300	388	314	37	66	145
Worcester ..	729	13	90	171	247	202	34	56	143
York, E. Rid.	5961	13	48	237	450	246	33	57	127
—— N. Rid.		20	93	183	533	224	36	63	151
—— W.Rid.		19	110	193	668	298	35	61	131
England	50,535	511	3,968	9,860	14,532	10,487	35	57	133
Wales	7,425	84	462	833	1,241	855	49	61	156
	57,960	595	4,430	10,693	15,773	11,342	35	58	134

Wales.

Counties of	Population. I. 1700.	II. 1750.	III. 1801.	Increase per cent.	IV. 1811.	Increase per cent.	V. 1821.
Anglesey	22,800	26,900	35,000	10	38,000	20	46,000
Brecon	27,200	29,400	32,700	19	39,000	14	44,500
Cardigan	25,300	32,000	44,100	18	52,000	13	59,000
Carmarthen	49,700	62,000	69,600	15	79,800	15	92,000
Carnarvon	24,800	36,200	43,000	19	51,000	16	59,100
Denbigh	39,700	46,900	62,400	6	66 400	18	78,000
Flint	19,500	29,700	41,000	17	48,100	14	54,900
Glamorgan	49,700	55,200	74.000	19	88,000	18	103,800
Merioneth	23,800	30,900	30,500	5	32,000	9	35,100
Montgomery	27,400	37.000	49,300	9	53,700	14	61.100
Pembroke	41,300	44,800	58,200	8	62,700	20	75.500
Radnor	15,300	19,200	19,700	10	21,600	8	23,500
Totals	366,500	449,300	559,000	13	632,600	16	731,800

Scotland.

Shires of	Population. 1801.	Increase per cent.	1811.	Increase per cent.	1821.	Number of Parishes.	Number of population returns, 1821.
Aberdeen	127,200	10	139,600	14	158,500	82	93
Argyll	74,300	9	88,400	12	99,300	50	56
Ayr	87,100	23	107,400	21	129,800	46	51
Banff	37,000	2	37,900	17	44,400	23	27
Berwick	31,600	1	31,800	7	34,100	33	34
Bute	12,200	2	12,400	13	14,100	5	6
Caithness	23,400	4	24,200	27	30,800	10	10
Clackmannan	11,200	11	12,400	9	13,500	5	6
Dumbarton	21,400	17	25,000	11	27,900	12	12
Dumfries	56,400	15	65,100	11	72,300	43	45
Edinburgh	127,100	21	153,600	27	195,300	41	46
Elgin	27,600	5	29,000	9	31,800	20	23
Fife	96,900	8	104,600	12	116,800	61	76
Forfar	102,400	8	110,800	4	115,700	54	56
Haddington	31,000	4	32,200	11	35,800	24	25
Inverness	76,800	5	80,900	14	92,000	30	37
Kincardine	27,200	4	28,400	5	29,700	19	21
Kinross	6,900	8	7,500	6	7,900	4	7
Kircudbright	30,200	15	34,800	14	39,700	28	28

Wales.

Counties of	VI. Area in square miles (Engl.)	VII. Divisional meetings or petty sessions.	VIII. Acting county magistrates.	IX. Number of parishes.	X. Number of population returns, 1821.	XI. No. of parish register returns, 1821.	XII. Annual propor. 1 baptism to	1 b. to	1 marriage to
Anglesey ..	271	4	22	67	76	72	41	83	146
Brecon	754	6	43	66	120	72	53	67	158
Cardigan....	675	9	46	65	109	70	40	70	159
Camarthen..	974	8	35	77	124	81	45	67	142
Carnarvon ..	544	5	31	69	77	69	38	69	149
Denbigh	633	8	36	59	108	59	37	62	154
Flint	244	7	24	27	68	31	34	64	190
Glamorgan ..	792	9	77	125	189	123	43	69	158
Merioneth ..	663	6	23	34	45	34	43	67	163
Montgomery	839	9	37	51	92	53	38	65	160
Pembroke ..	610	7	67	141	158	139	47	83	159
Radnor	426	6	21	52	75	52	36	64	159
Totals	7,425	84	462	833	1,241	855	41	69	156

Scotland.

Shires of	Population. 1801.	Increase per cent.	1811.	Increase per cent.	1821.	Number of parishes.	No. of population returns, 1821.
Lanark	151,600	31	198,100	26	249,300	50	51
Linlithgow	18,400	9	20,100	15	23,100	13	15
Nairn	8,500	..	8,500	8	9,200	4	7
Orkney and Shetland	48,400	..	47,700	14	54,200	53	56
Peebles.....	9,000	14	10,300	..	10,200	16	16
Perth.....	130,600	7	139,600	2	141,800	81	83
Renfrew	80,700	19	96,100	19	114,400	17	22
Ross and Cromartie	57,200	10	62,900	12	70,200	33	33
Roxburgh.....	34,800	11	38,500	8	41,700	32	34
Selkirk	5,200	16	6,100	11	6,800	5	9
Stirling.....	52,500	15	60,200	11	66,700	24	29
Sutherland	23,900	2	24,400	..	24,300	13	15
Wigtoun	23,700	17	27,800	22	33,900	17	17
Totals	1,652,400	13	1,865,900	14½	2,135,300	948	1,046

Remark.

To the resident population in Scotland for the years 1801 and 1811, one-thirtieth part is here added for the probable proportion of army and navy: to the resident population of 1821, one-fiftieth part is added.

Places throughout ENGLAND, WALES, and SCOTLAND, whose Population, by the last Returns, exceed 5,000, taken from the Counties alphabetically.

ENGLAND.					
		Colchester	14,016	Toxteth-Park	12,829
		Gloucester	9,744	West-Derby	6,304
		Wotton-u.-Edge	5,004	Warrington	13,570
Bedford	5,466	Bisley	5,421	Ashton in Mack.	5,674
Newbury, Berks	5,347	Stroud	7,097	Lancaster	10,144
Abingdon	5,137	Cheltenham	13,396	Liverpool	118,972
Reading	12,867	Bristol	87,779	Manch. & Salf.	133,788
Windsor	5,698	*Hereford*	9,090	Wigan	17,716
Chesham	5,032	*Deal, Kent*	6,811	*Leicester*	30,125
H. Wycomb. Bucks	5,599	Margate	7,843	Loughboro'	7,365
Cambridge	14,142	Ramsgate	6,031	*Lincoln*	10,367
Ely	5,079	Gillingham	6,209	Spalding	5,207
Wisbea. St. Peter	6,515	Tonbridge	7,406	Gainsboro'	5,893
Whittlesey	5,276	Minster	8,414	Louth	6,012
Chester	19,949	Lewisham	8,185	Boston	10,373
Duckinfield	5,096	Canterbury	12,745	Grantham	9,394
Stockport	21,726	Chat. & Rochest.	24,063	Stamford	5,050
Congleton	6,405	Deptf. & Greenw.	40,574	*Pancras, Middle.*	71,838
Macclesfield	17,746	Dover	10,327	Edmonton	7,900
Gwennap, Cornw.	6,294	Maidstone	12,508	Enfield	8,227
Camborne	6,219	Woolwich	17,008	Isleworth	5,269
Penzance	5,224	*Lancaster*	10.144	Islington	22,417
Illogan	5,170	Preston	24,575	Hampstead	7,263
Redruth	6,607	Burnley	6,378	Paddington	6,746
St. Austell	6,175	Colne	7,274	Chelsea	26,860
Kenwyn	6,221	New-Church	8,557	Ealing & O. Bren.	6,608
St. Agnes	5,762	Blackburn	21,940	Fulham	6,492
Workington, Cum.	6,439	Darwen Over	6,711	Hammersmith	8,809
Penrith	5,385	Walton-le-Dale	5,740	Kensington	14,428
Carlisle	15,476	Haslingden	6,595	Hackney Road	11,636
Whitehaven	12,438	Chorley	7,315	——— Town	11,766
Derby	17,423	Ashton-u.-Line	25,967	*Norwich, Norf.*	50,288
Belper	7,235	Bolton, Great	22,037	King's-Lynn	12,253
Chesterfield	5,077	——— Little	9,258	Yarmouth	18 040
Exeter, Devon.	23,479	Bury	10,583	*Northampton*	10,793
Barnstaple	5,079	Heap	6,552	Peterboro'	8,558
Crediton	5,515	Tottington, lower	7,333	*Newcast. North.*	35,181
Tavistock	5,483	Barton	7,977	Long. Benton	5,547
Tiverton	8,631	Pendleton	5,948	North Shields	8,205
Plymouth	61,212	Worsley	7,191	Tynemouth	9,454
Poole, Dorset	6,390	Chorton-Row	8,209	Wallsend	5,103
Weym. & Melc.	6,622	Heaton-Norris	6,958	Alnwick	5,927
Durham	9,822	Middleton	5,809	Berwick	8,723
Gates' Head	11,767	Chadderton	5,124	*Nottingham*	40,415
South Shields	8,885	Crompton	6,482	Mansfield	7,861
Westoe	7,618	Oldham	21,662	Newark	8,084
Darlington	5,750	Pilkington	8,976	*Oxford & Lib.*	16,364
Stanhope	7,341	Butterworth	5,554	*Shrewsbu. Salop*	21,695
Bp. Wearmouth	11,542	Castleton	7,894	Dawley Mag.	5,147
Stockton-u.-Tees	5,184	Two Spotlands	13,453	Wellington	8.390
Sunderland	14,725	Wardleworth	6,451	Hales-owen	10,946
West Ham, Essex	9,753	Waerdale	5,629	Ellesmere	6,056

Places whose Population exceeds 5,000, continued.

Madeley	5,379	*Kirby Kend. Wes.*	8,984	*Carna von*	5,788
Wenlock	17,265	*New Sarum, Wilts*	8,763	Mold, *Flint*....	6,268
Bath, Somerset.	36,811	Trowbridge....	9,545	Swansea, *Glam.*	10,255
Bridgwater....	6,155	Warminster....	5,612	Merther-Tidvil	17,404
Taunton	8,534	Westbury.....	7,846		
Lyncomb.....	5,880	*Worcester*.....	17,023		
Frome-Selwood	12,411	Kidderminster	10 709		
Bedminster....	7,979	Dudley.....	18,211	SCOTLAND.	
Shepton Mallet	5 021	Stourbridge....	5,090		
Southampton....	13,353	*York*, city, E.R.	20 787		
Portsmouth....	45 648	—— St. Peter	9,204	*Aberdeen*	26,484
Winchester	13,353	—— Ainsty ..	8,740	Machar	18,312
Isle of Wight ..	31,616	Kingst.-u.-Hull	31,425	Campbleto. *Arg.*	6,445
Alverstoke	10,972	Beverley	7,503	Maybole	5,204
Stafford	5,736	Sculcoates	10,449	Kilmarnock ..	12,769
Lichfield	6,075	Whitby, N.R...	8,697	Ruthven, *Banf.*	5,564
Newcas.-u.-Line	7,031	Scarboro'.....	8,533	Latheron, *Caith.*	6,575
Darlaston	5.585	Leeds, W.R. ..	83,796	Wick	6,713
Tipton.....	11,546	Doncast. & Soke	9 727	Alloa, *Clackm.*..	5,577
Walsall.....	11,914	Ripon & Lib. ..	12,131	*Dumfries*	11,052
Wednesbury ..	6,471	Dewsbury	6,380	*Edinburgh* 138,235	
West Bromwich	9,505	Mirfield	5,041	Dalkeith	5,169
Burslem	9,699	Wakefield	10,764	Inveresk	7,836
Hanley.....	5,622	Almonbury	5,679	*Elgin*	5 308
Longton	7,100	Huddersfield ..	13,284	Cupar, *Fife*	5,892
Shelton	7,325	Knaresboro' ..	5,283	Dunfermline ..	13,681
Kingswinford ..	11,022	Gomer.gr. & litt.	5,957	*Forfar*	5,397
Rowley Regis..	6,062	Bierley, N.	6,070	Abroath	5,817
Sedgley	17,195	Bradford	13,064	Brechin	5,906
Wolverhampton	18,380	Horton.....	7,192	Dundee	30,575
Bilston.....	12,003	Pudsey	6,229	Kirriemuir	5,056
Allstonefield ..	5,169	Elland	5,088	Montrose.....	10,338
Ipswich, Suff. ..	17,186	Halifax	12,628	*Haddington*	5,255
Bury St. Ed. ..	9,999	Ouram, N. & S.	11,097	Dunbar	5,272
Southwar. Surry	85,905	Ovenden	6,360	*Inverness*	12,264
Bermondsey ..	25.235	Sowerby	6,890	Uist, N. & S. ..	11,009
Camberwell ..	17,876	Stansfield.....	7,275	*Lanark*.....	7,085
Clapham	7,151	Bingley, &c. ..	6,176	Avendale.....	5 030
Lambeth	57,638	Keighley	9,223	Hamiton	7,613
Newington	33,047	Barnesley	8,284	Monklan.O &N.	14.345
Rotherhithe....	12,523	Bradfield	5.298	Lesmahagon ..	5,592
Wandsworth ..	6,702	Ecclesfield	7,163	Glasgow 147,043	
Richmond	5,994	Brightside-Bier	6,615	*Perth*	19,068
Croydon	9,254	Ecclesall-Bier..	9,113	Abbey, *Renf.* ..	20,575
Lewis, Sussex ..	7,083	Sheffield	42,157	Eastwood	5,676
Chichester	7,362			Greenock	22,088
Brighton	24,429			Paisley.....	26,428
Hastings	5,085	WALES.		Port Glasgow ..	5,262
Warwick	8,235			Jedburgh, *Roxb.*	5,251
Birmingham ..106,722				Falkirk, *Stirl.* ..	11,536
Coventry, city	21,241	Amlwch, *Angles.*	5,292	Ninians	8,274
———, coun.	8,138	*Carmarthen*	8,906	Stirling.....	7,113

POPULATION OF THE METROPOLIS.

Within the London Bills of Mortality.	HOUSES.				OCCUPATIONS			PERSONS.		
	Inhabited.	By how many families occupied.	Building.	Uninhabited.	Families chiefly employed in Agriculture.	Families chiefly employed in Trade, Manufactures or Handic.	All other families not comprized in the two preceding classes.	Males.	Females.	Total of Persons.
City of London, Within the Walls	7,938	11,571	32	560	2	9,609	1,960	27,506	28,668	56,174
Without the Wa. exclu. of South	9,232	16,497	73	455	55	11,592	4,850	34,441	34,819	69,260
Westmin. & Lib.	18,502	41,551	391	382	08	25,126	16,120	85,082	97,003	182,085
Out-parishes in Middle. & Sur.										
St. Andr. Holb. abo. Bars (part of) with St. Geo. the Martyr .	2,829	6,285	29	130	0	3,824	2,461	12,316	14,176	26,492
Artiller. Gr. Old Bermondsey St.	187	385	0	19	0	303	82	685	802	1,487
Mary Mag. .	4,278	6,715	51	362	123	5,354	1,238	12,125	13,110	25,235
Bethnal Gre. St. Matthew .	8,095	10,701	200	292	81	7,779	2,841	22,253	23,423	45,676
Botolp. St. without Aldgate	941	1,575	3	79	16	1,130	429	3,032	3,397	6,429
Charter House	11	11	0	0	0	0	11	102	42	144
Christ Church, Spital-fields	2,300	4,752	34	191	13	4,506	233	9,025	9,625	18,650
Christ Church in Surrey . .	1,811	3,193	13	33	21	2,303	869	6,280	7,059	13,339
Clement, St. Danes, part of	487	836	1	7	0	507	329	1,905	2,105	4,010
Clerkenwell, St. James & St. Jo.	4,995	9,726	185	202	72	6,953	2,701	18,533	20,572	39,105
Duchy of Lanc. (part of) .	67	63	0	1	0	34	29	227	262	489
Ely Place .	45	48	0	0	0	12	36	97	171	268
Giles, St. in the Fields, & Geo. St. Bloomsbu.	4,456	12,255	27	131	0	8,366	3,889	24,289	27,504	51,793
Geo. St. in the E.	5,345	7,612	183	365	0	5,049	2,563	14,740	17,788	32,528
Geo. St. South.	5,149	8,901	125	271	65	7,009	1,827	17,516	18,852	36,368
Glass Hous. Ya.	168	335	1	1	0	239	96	641	717	1,358
Hackney. St. Jo.	3,715	4,653	116	206	187	1,883	2,583	9,766	12,728	22,494
Horsley d. St. Jo.	1,527	2,209	18	88	19	1,465	725	4,379	4,784	9,163
Islingt. St. Mary	3,495	4,244	124	172	19	1,543	2,682	9,550	12,867	22,417
Katherine. St. near the Tow.	427	685	0	38	0	527	158	1,300	1,324	2,624
Lamb. St. Mary	9,294	13,047	248	377	447	6,969	5,631	25,792	31,846	57,638
Limeho. St. Ann	1,683	2,317	83	119	4	1,249	1,064	4,589	5,216	9,805
Luke, St. Middl.	5,517	10,610	83	280	47	8,586	1,977	19,987	20,889	40,876

POPULATION OF THE METROPOLIS, concluded.

Within the London Bills of Mortality. / Out-parishes in Middle. & Sur.	HOUSES. Inhabited.	HOUSES. By how many Families occupied.	HOUSES. Building.	HOUSES. Un-inhabited.	OCCUPATIONS. Families chiefly employed in Agriculture.	OCCUPATIONS. Families chiefly employed in Trade, Manufactures, or Handi.	OCCUPATIONS. All other Families not comprised in the two preceding Classes.	PERSONS. Males.	PERSONS. Females.	PERSONS. Total of Persons.
Newing. Butts, St. Mary .	5,819	7,935	160	405	148	4,373	3,414	14,917	18,130	33,047
Olav. St. South.	1,221	2,105	4	59	1	1,223	831	4,154	4,266	8,420
Rolls Liberty .	313	602	6	4	0	504	98	1,415	1,322	2,737
Rotherh. St. Ma.	2,098	2,934	17	114	134	1,915	885	5,757	6,766	12,523
Saffron Hill and Hatton Garden	911	2,244	0	77	0	1,826	418	4,454	4,548	9,002
Savio. St. South.	2,639	4,445	50	47	166	2,751	1,528	8,423	8,385	16,808
Savoy, St. J. Bap	31	49	7	0	0	34	15	101	121	222
Sepulc. St. pt. of	555	1,156	0	19	0	940	216	2,381	2,359	4,740
Shadw. St. Paul	1,682	2,399	7	143	0	2,399	0	4,482	5,075	9,557
Shored. St. Leo.	8,269	12,828	93	494	42	8,284	4,502	24,843	28,123	52,966
Stepney, St. Du.	8,386	11,479	272	609	42	6,473	4,964	22,706	26,457	49,163
Thos. St. South.	130	351	0	4	0	324	30	938	869	1,807
Tower Liberty	84	117	0	9	0	9	108	176	287	463
Tower, Old Pre.	31	41	0	6	0	29	12	99	106	205
Wappg. St. Jo.	483	822	1	150	0	563	259	1,432	1,646	3,078
Whitechapel, or St. Mary Matf.	4,225	7,118	29	283	0	3,955	3,163	14,394	15,013	29,407
Parishes not within the Lond. Bills of Mortal.										
Chelsea, St. Lu.	3,602	5,829	116	138	275	2,979	2,575	11,623	15,237	26,860
Kensington .	1,984	3,218	14	68	332	1,621	1,265	5,749	8,679	14,428
St. Mary-le-bon	9,761	22,516	261	143	20	12,608	9,838	41,386	54,654	96,040
Paddington .	1,139	1,448	28	13	4	760	634	2,852	3,624	6,476
Pancras, St. .	8,824	16,382	181	400	377	8,752	7,253	31,796	40,042	71,838
TOTALS .	164,681	287,101	3299	8246	3020	184,239	99,842	570,236	655,458	1,225,694
ISLANDS OF										
Guernsey, &c.	3,083	4,298	21	107	1,676	2,175	447	9,519	11,308	20,827
Jersey . . .	4,053	5,813	28	41	2,310	2,756	747	13,056	15,544	28,600
Mann . . .	6,627	7,858	49	279	3,520	2,864	1,474	19,158	20,923	40,081
TOTAL .	13,763	17,969	98	427	7,506	7,795	2,668	41,733	47,775	89,508

The Population of the Scilly Islands was not regularly ascertained, for the purpose of insertion in this Abstract; but on the authority of the Rev. J. Wallis, jun. of Bodmin, may be safely stated at 2,614 Persons.

AGES OF PERSONS WITHIN THE METROPOLIS.

	Under 5	5 to 10	10 to 15	15 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90	90 to 100	100 & upwards.	Total.
Total of Males..	61,284	48,030	41,072	37,937	75,385	67,938	52,824	32,058	15,513	5,639	986	74	9	438,749
Females	60,993	49,907	41,835	48,136	103,433	78,604	54,806	34,663	19,505	7,849	1,758	197	16	501,682

ACCOUNT OF THE IMPORTS AND EXPORTS OF GREAT BRITAIN AND IRELAND.

From the Finance Class Accounts I. to VIII. for the Year ending 5th Jan. 1822.

Years ending 5th Jan.	IMPORTS. Official Value.	EXPORTS. At the Official Rate of Valuation. Produce and Manufacture of the United Kingdom.	Foreign and Colonial Merchandize.	Total Exports.	British Produce and Manufacture, according to the real Value.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1820	30,748,146 1 10	33,481,836 9 5	9,905,184 11 10	43,387,021 1 3	35,204,564 19 0
1821	32,438,650 17 3	38,395,555 7 2	10,555,912 10 3	48,951,467 17 5	36,424,652 13 11
1822	30,744,028 5 6	40,831,744 17 5	10,698,479 14 5	51,530,224 11 10	36,659,631 3 0

AMOUNT OF THE REVENUE AT THE COMMENCEMENT OF EACH REIGN.

	Year.	Annual Income.		Year.	Annual Income.
William the Conqueror.....	1066	£400,000	Henry VII.....	1485	£400,000
William Rufus.....	1087	350,000	Henry VIII.....	1509	800,000
Henry I.....	1100	300,000	Edward VI.....	1547	400,000
Stephen.....	1135	250,000	Mary.....	1553	450,000
Henry II.....	1154	200,000	Elizabeth.....	1558	500 000
Richard I.....	1189	150,000	James I.....	1602	600,000
John.....	1199	100,000	Charles I.....	1625	895,819
Henry III.....	1214	80,000	The Commonwealth.....	1648	1,517,247
Edward I.....	1272	150,000	Charles II.....		1,800,000
Edward II.....	1307	100,000	James II.....	1684	2,001,855
Edward III.....	1347	154,139	William III.....	1688	3,895,205
Richard II.....	1377	130,000	Queen Anne.....	1706	5,691,803
Henry IV.....	1399	100,000	George I.....	1714	6,762,643
Henry V.....	1413	76,643	George II.....	1727	8 522,540
Henry VI.....	1422	64,976	George III.....	1760	8,800,000
Edward IV.....	1460	100,000	George IV.(ending Oct.10.)	1820	50,643,810
Edward V.....	1483		Do...Year ending Jan. 5..	1822	50,931,705
Richard III.....	1483	100,000			

NATIONAL DEBT.

	Capital.
National Debt at the Revolution 1688	£664,263
Increase during the reign of William III.	15,730,439
Amount at the accession of Queen Anne	16,394,702
Increase during the reign of Queen Anne	31,969,799
Amount at establishment of Sinking Fund, 1716	48,364,501
Increase during the reign of George I.	4,654,654
Amount at the accession of George II	53,019,155
Decrease during the Peace	6,064,532
Amount at commencement of the War, 1739	46,954,623
Increase during the War	31,338,689
Amount at the end of the War in 1748	78,293,312
Decrease during the Peace	3,312,426
Amount at the commencement of the War in 1755	74,980,886
Increase during the War	66,710,427
Amount at the end of the War, 1762	141,691,313
Decrease during the Peace	5,748,262
Amount at the commencement of the American War, 1775	135,943,051
Increase during the War	132,157,328
Amount at the conclusion of the American War, 1783	268,100,379
Increase in the year 1789	1,189,140
Amount in 1789	269,289,519
Redeemed during the Peace	9,441,850
Amount at the commencement of the War in 1793	259,847,669
Increase during the War	350,013,508
	609,861,177
Redeemed during the War	69,243,336
Amount at the conclusion of the War in 1802	540,617,841

An Account of the Total Amount of the National Debt of England and Ireland, including the Austrian and Portuguese Loans, and including the Debt cancelled in each year, from the 5th January 1803, to the 5th January 1821.

Years ended.	Total amount of Debt.	Debt contracted in each Year.	Debt redeemed in each Year, including 5 per cents. 1797 paid off.	Total unredeemed Debt.	Total unfunded Debt.	Total unredeemed and unfunded Debt.
1804	630,267,911	19,210,523	13,181,667	528,260,641	25,384,173	553,644,814
1805	660,671,215	30,403,304	12,860,629	545,803,317	31,213,231	577,016,548
1806	702,157,526	41,486,311	13,759,696	573,529,530	34,227,792	607,757,722
1807	737,923,680	35,766,153	15,341,797	593,954,285	33,982,378	627,936,863
1808	761,767,428	23,843,748	16,064,961	601,733,072	38,471,501	640,204,573
1809	780,503,518	18,736,089	16,181,687	604,287,474	45,725,888	650,013,362
1810	807,661,777	27,158,259	16,656,643	614,789,090	46,701,148	661,490,238
1811	835,058,855	27,397,078	17,884,233	624,301,935	45,072,851	669,374,786
1812	867,073,720	32,014,864	20,733,353	635,583,446	49,159,153	684,743,399
1813	917,146,290	50,072,569	24,246,058	661,409,956	54,680,617	716,090,573
1814	1,023,282,007	106,135,807	27,522,229	740,023,534	59,264,952	799,288,486
1815	1,058,675,481	35,393,383	22,559,681	752,857,235	68,882,979	821,740,214
1816	1,146,131,268	87,455,786	24,001,084	816,311,939	48,510,501	864,822,540
1817	1,149,137,360	3,006,092	23,117,840	796,200,190	52,082,287	848,282,477
1818	1,149,094,403	3,193	19,460,982	776,742,103	66,772,364	843,514,767
1819	1,183,867,783	34,773,380	19,648 469	791.867,313	53,095,008	844,962,321
1820	1,218,172,652	34,304,869	31,191,703	794,980,481	48,408,323	843,388,804
1821	1,249,276,368	31,103,714	24,518,885	801,565,310	43,535,621	845,100,931

ENGLISH DIOCESES, THEIR EXTENT, ECCLESIASTICAL OCCUPANTS, &c.

Bishops.	Deans.	Dioceses.	Province.	Extent of Diocese.	Parish Churches	Canons.	Prebendaries.
Dr. Sutton, Abp..	Dr. Andrewes.....	Canterbury	Cant.	Part of Kent.....	257		12
Dr. Howley.....	Dr. Van Mildert....	London.....	Cant.	Essex, Midd. part of Herts..	623	4	26
Dr. Tomline.....	Dr. Rennel.....	Winchester.....	Cant.	Surry, Hants. Isle of Wight, Jersey, Guernsey, Alder.	362		12
Dr. Cornwallis...	Dr. Woodhouse....	Lichf. and Coventry.	Cant.	Staffordshire, Derbyshire, pt of Warwick. Shropshire.	557	6	17
Dr. Pelham.....	Dr. Gordon.....	Lincoln.....	Cant.	Lincoln. Leicest. Hunting. Bedford. Bucks. pt of Herts.	1247	4	46
Dr. Sparke.....	Dr. Wood.....	Ely.....	Cant.	Cambridgeshire.....	141		8
Dr. Fisher.....	Dr. Talbot.....	Salisbury.....	Cant.	Wiltshire and Berkshire.....	248	6	36
Dr. Carey.....	Dr. Landon.....	Exeter.....	Cant.	Cornwall, Devonshire.....	604	9	16
Dr. Beadon.....	Dr. Ryder.....	Bath and Wells....	Cant.	Somersetshire.....	388	8	42
Dr. Buckner.....	Dr. Bethel.....	Chichester.....	Cant.	Sussex.....	250	4	28
Dr. Bathurst....	Dr. Turner.....	Norwich	Cant.	Norf. Suff. part of Cambridg.	1121		6
Dr. Cornwall....	Dr. Jenkinson.....	Worcester.....	Cant.	Worcestershire, pt of Warwick.	241		10
Dr. Huntingford.	Dr. Carr.....	Hereford.....	Cant.	Herefordshire, part of Shropsh.	313	6	22
Dr. King.....	Dr. Rob. Steven....	Rochester.....	Cant.	Part of Kent.....	98		6
Dr. Legge.....	Dr. Hall.....	Oxford.....	Cant.	Oxfordshire.....	195	8	
Dr. Marsh.....	Dr. Kipling.....	Peterborough.....	Cant.	Northamptonshire, Rutlandshire	293		6
Dr. Ryder.....	Dr. Plumtre.....	Gloucester.....	Cant.	Gloucestershire.....	267		6
Dr. Kaye.....	Dr. Beeke.....	Bristol.....	Cant.	City of Bristol, part of Glou. and co. of Dorsetsh.	236		6
Dr. Van Mildert..	Arch. Probyn.....	Landaff.....	Cant.	Glamorgansh. Monmouthsh. Brecknocksh. Radnorsh.	177		12

ENGLISH DIOCESES, &c. Concluded.

Bishops.	Deans.	Dioceses.	Province.	Extent of Diocese.	Parish Churches	Canons.	Prebendaries.
Dr. Burgess.....	Dr. Richardson	St. David's	Cant.	Pembrokesh. Cardigansh. Caermarthenshire.....	308	6	10
Dr. Luxmore....	W. D. Shipley, M.A.	St. Asaph.....	Cant.	Flint, Denbigh, Montgom. part of Shropshire.....	121	7	3
Dr. Majendie....	Dr. Warren.....	Bangor.....	Cant.	Anglesey, Caernarv. Merio. pt of Denbigh, Montgom.	107	3	2
Dr. Vernon, Abp.	W. Cockburn, M.A.	York.....	York	Most of Yorksh. & Nottinghams.	581	4	26
Dr. Barrington..	Dr. Vaughan.....	Durham.....	York	Durham and Northumberland.	163		12
Dr. Goodenough..	Dr. Hodgson.....	Carlisle.....	York	Part of Cumber. and Westmor.	93		4
Dr. Law.....	Dr. Cornwallis....	Chester.....	York	Chesh. Lancash. Richmond, pt of Cumber. & Westmor.	256		6
Dr. Murray.....		Sodor and Mann...	York	Isle of Mann.....			

Suffragan Bishops, by stat. 26. Henry VIII., still in force, may be appointed for the following places:—For Canterbury, at Dover only; for York at Nottingham and Hull; London, at Colchester; Durham, at Berwick; Winchester, at Guildford, Southampton, and in the Isle of Wight; Lincoln, at Bedford, Leicester, Grantham, and Huntingdon; Norwich, at Thetford, and Ipswich; Salisbury, at Shaftsbury, Melton, and Marlborough; Bath and Wells, at Taunton; Hereford, at Bridgenorth; Coventry and Lichfield, at Shrewsbury; Ely, at Cambridge; Exeter, at St. Germains; Carlisle, at Penrith; these only to be the Sees of Bishop's Suffragans, and no more. In Public Assemblies they take place next after the Temporal Peers of the Realm.

Number of Persons, out of 1000, living at the several Ages and Places specified.

Ages.	London.	Stockholm.		Northampton	Chester.		Sweden.			Holy Cross
		Males.	Fem.		Males.	Fem.	Males.	Fem.	Both.	
0	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1	680	577	611	743	773	828	770	791	780	817
2	548	497	521	625	678	739	720	739	730	754
3	492	443	468	582	624	683	686	704	695	708
4	452	405	433	553	588	648	662	679	671	677
5	426	381	413	536	571	623	647	666	656	651
6	410	366	398	521	556	609	635	654	644	630
7	397	355	386	509	543	601	624	643	634	614
8	388	346	377	499	537	596	615	635	625	601
9	380	338	370	492	528	591	608	628	618	594
10	373	330	364	487	524	588	601	622	611	589
11	367	325	359	483	521	585	596	616	606	585
12	361	321	356	478	519	583	591	612	602	582
13	356	317	354	474	516	579	587	608	597	579
14	351	314	351	470	513	576	583	604	594	576
15	347	310	348	465	511	572	579	601	590	573
16	343	306	345	461	506	568	575	597	586	569
17	338	301	342	457	501	563	571	593	582	565
18	334	296	339	452	496	558	567	589	578	561
19	329	291	335	446	490	553	563	585	574	557
20	325	285	331	441	485	547	558	581	570	553
21	321	279	327	434	479	543	553	577	565	548
22	316	273	323	428	473	538	548	572	560	542
23	310	267	319	421	467	533	543	568	555	537
24	305	261	315	415	461	528	538	564	551	531
25	299	254	311	409	454	523	532	559	546	525
26	294	247	306	402	448	515	527	555	541	519
27	288	240	302	396	441	508	521	550	535	512
28	283	233	297	389	434	500	516	544	530	506
29	278	226	291	383	428	493	510	539	525	500
30	272	219	285	376	422	485	505	533	519	494
31	266	212	279	370	417	479	499	527	513	489
32	260	205	273	364	412	473	493	521	507	483
33	254	198	267	357	407	467	487	515	501	478
34	248	192	261	351	402	461	481	508	495	472
35	242	185	254	344	397	455	475	502	488	466
36	236	179	248	338	391	448	469	496	482	460
37	230	172	242	331	385	442	463	490	477	453
38	224	166	236	325	379	435	457	485	471	447
39	218	160	230	318	373	429	451	479	465	441
40	212	154	223	312	366	422	445	473	459	435
41	207	148	217	305	360	415	438	467	453	428
42	201	142	210	299	352	408	431	459	445	422
43	194	136	204	292	345	401	423	452	437	416
44	187	130	197	285	337	394	415	444	430	409
45	180	124	190	279	329	387	407	437	422	402
46	174	119	184	272	322	380	399	429	414	394
47	167	113	177	265	314	373	391	423	407	387
48	159	108	171	259	306	366	383	416	400	380

Number of Persons, &c. continued.

Ages.	London.	Stockholm.		Northampton	Chester.		Sweden.			Holy Cross
		Males.	Fem.		Males.	Fem.	Males.	Fem.	Both.	
49	153	102	164	252	298	359	375	410	392	373
50	147	97	158	245	290	352	367	403	385	365
51	141	91	152	238	281	345	357	395	376	358
52	135	86	146	231	273	338	348	387	367	351
53	130	81	141	224	264	331	338	379	358	344
54	125	76	135	217	256	325	329	370	349	335
55	120	71	130	210	249	318	319	362	340	327
56	116	67	125	203	241	312	310	353	331	319
57	111	62	120	196	234	306	300	345	322	310
58	106	58	115	189	226	300	290	336	312	301
59	101	54	110	182	219	293	280	327	303	292
60	96	50	105	175	211	286	270	317	293	283
61	92	46	100	168	201	277	260	306	282	273
62	87	42	94	161	190	265	249	294	271	264
63	83	38	88	154	178	253	237	282	259	255
64	78	35	82	147	167	242	226	270	247	245
65	74	31	77	140	156	232	214	258	235	236
66	70	28	72	133	148	224	203	246	224	226
67	65	26	67	126	141	217	191	234	212	216
68	61	23	62	119	136	210	179	222	200	206
69	56	21	57	113	130	202	167	210	187	195
70	52	20	52	106	123	193	154	198	175	185
71	47	17	47	99	115	181	142	185	162	175
72	43	15	42	92	103	167	129	171	149	164
73	39	13	38	85	92	153	117	156	135	155
74	35	11	33	78	81	139	105	140	121	144
75	32	10	28	71	72	127	94	125	108	134
76	28	8	23	65	64	116	84	111	96	124
77	25	6	19	58	58	106	74	98	84	115
78	22	5	16	52	52	96	65	86	75	106
79	19	4	13	46	47	86	56	75	65	96
80	17	3	10	40	41	76	48	65	56	87
81	14	2	8	35	36	66	41	55	47	78
82	12	2	6	30	31	57	34	46	38	69
83	10	1	4	25	26	47	27	38	31	61
84	8	1	3	20	22	37	21	30	24	53
85	7	1	2	16	19	29	16	22	19	44
86	6	0	1	12	15	23	12	17	14	36
87	5	0	1	9	13	19	9	13	11	29
88	4	0	0	7	11	16	7	10	8	23
89	3	0	0	5	9	14	5	8	6	18
90	2	0	0	4	7	13	4	6	5	13
91	1	0	0	3	6	11	3	4	3	10
92	0	0	0	2	4	9	2	3	2	8
93	0	0	0	1	2	7	1	2	1	6
94	0	0	0	1	1	5	0	1	0	4
95	0	0	0	0	0	3	0	1	0	2

SOME USES OF THE FOREGOING TABLE IN MATTERS RELATING TO HUMAN LIFE.

1st. Let it be required to find the probability that a person, say of thirty-six, lives 30 years longer, or attains to the age of 66 years. Look in the table, for example Holy Cross, against 36 years and 66 years, and corresponding thereto, you will find the numbers 460 and 226 respectively; shewing, that out of 460 persons living of 36 years of age, only 226 arrive at the age of 66: therefore, seeing the whole number of persons living at the beginning of this term is to the number remaining alive at the end of it, in the ratio of 460 to 226, the number of chances that a person of 36 years of age has to live 30 years longer, will be to the number of all the chances that he has both to live beyond and die within 30 years, in the same ratio of 460 to 226, and therefore $\frac{226}{460}$ is the measure of the probability required; the probability of the happening of any event being always to be considered as the ratio of the chances which that event has to happen, to all the chances which it has both to happen and to fail.

If the Northampton column were adopted, the measure of the probability would be $\frac{133}{338}$, a less fraction than the former.

2nd. To find how many people are of any age compared with the whole number of people in a nation.

Suppose it be required to know how many men there are in England that are capable of bearing arms. Take the population at 10 millions, and the ages from 20 to 35 inclusive, and employ the column of males at Chester, as probably furnishing a fair medium of the whole nation. The sum of the numbers in that column from 20 to 35 inclusive is 6542; and the amount of the whole column from 0 to 95 is 28620. Then these numbers, forming respectively the numerator and denominator of a fraction, give $\frac{6542}{28620}$ of the male population for the number required, taking $\frac{10}{21}$ of the whole population, that is to say, 4,762,000 for males; then $\frac{6542}{28620}$ of 4,762,000, or 1,088,500, the number required.

3. To find how many years, it is an even wager, whether a person of a given age shall live or die, as suppose his age be 38.

Take, suppose in the Northampton column, the number against 38, which is 325, and half of it, which will be 162; then seek it in the table, which will be at 62: therefore it is an even wager that he lives till 62, that is 24 years.

4. To find the difference of insurance upon different lives, as between 30 and 50.

Here, taking the same column, it is 370 to 6, or $61\frac{2}{3}$ to 1, that a man of 30 dies not in a year; and 245 to 7, or 35 to 1, for a man of 50. The prices of insurance for a year, ought therefore to be as $61\frac{2}{3}$ to 35, or $12\frac{1}{3}$ to 7.

5. To find the probability of a person of a given age a, living any number of years t.

Let N= number of persons living at the age a, L= persons living at the age $a+t$; then $\frac{L}{N}$= probability of his living t years, and $\frac{N-L}{N}$= probability of his being dead in t years.

6. To find the chances of two lives, A and B, whose ages are a and b.

Thus, by the table, let t= any time, and

N= number of persons living at the age a.

n= persons living at the age b.

L= persons living at the age $a+t$.

l= persons living at the age $b+t$.

$D=N-L$= persons dead in t years (after a).

$d=n-l$= persons dead in t years (after b).

Then,

$\frac{Ll}{Nn}$= probability of both A and B living t years.

$\frac{Dd}{Nn}$= probability of both being dead in t years.

$1-\frac{Dd}{Nn}$, or $\frac{Nn-Dd}{Nn}$= probability of one of them living t years.

$\frac{Ld}{Nn}$= probability of A being alive and B dead in t years.

7. To find the chances for three lives, A, B, C, whose ages are a, b, c.

Denoting the numbers as in Art. 6; and, moreover, putting

p= persons living at the age c.

m= persons living at the age $c+t$.

$f=p-m$= persons dead in t years after c.

Then,

$\frac{Llm}{Nnp}$= probability of all three living t years.

$\frac{Ddf}{Nnp}$= probability of all being dead in t years.

$1-\frac{Ddf}{Nnp}$, or $\frac{Nnp-Ddf}{Nnp}$= probability of some of them living t years.

$\frac{Ldf}{Nnp}$= probability of A being alive and the rest dead in t years.

$\frac{Llf}{Nnp}$= probability of A and B being alive and C dead in t years.

8. To find the value of a sum of money, due t years hence, for one or more lives.

It is plain the purchaser ought only to pay such a part of the present value as there are chances for the persons living. Therefore (by Art. 5, 6, or 7,) find the probability of the person or persons living t years hence, and multiply this by the present worth of 1*l.*, and that product by the sum given, for the value required. As, for example, to find the value of 100*l.* due 12 years upon the longest of two lives, aged 40 and 50, at 4 per cent. Here, taking the London column, we have (Art. 6.) t=12, N=212, n=147, D=212—135=77, d=147—87=60. Present value of 1*l.* due 12 years hence, at 4 per cent. per annum, .6246.

Probability $=\frac{Nn-Dd}{Nn}=\frac{26544}{31164}=.85175$.

Consequently $.85175\times.6246\times100=53.2=53l.$ 4*s.* the present value.

9. To find the value of an annuity for one or more lives, or to continue t years, if the persons live as long.

By Art. 8. find the present value of the annual rent for 1 year, for 2 years, for 3 years, and so on till you get t years; then the sum of all these is the value required for t years. But if t is not given, this process is to be continued till the terms be 0, or so small as to be inconsiderable, which will be at the extremity of old age. This often re-

quires a laborious calculation, and therefore shorter methods are given by writers on this subject.

10. Any number of equal ages being given to find the value of the longest life.

Take the number in the table against the common age given, and divide it by the number of lives. Seek the quotient (or the next less) in the table, and take the age against it, from which subtract the given age; the remainder shews how long an annuity certain is to continue, which is equal in value to the longest life.

11. To find the value of the reversion, after one or more lives.

Find the value of the annuity for the life or lives proposed, by Art. 9; and subtract it from the value of the perpetuity.

It is not difficult to conceive, that, in a great length of time, chance very little disturbs such events as were designed to happen according to some determinate law; for however irregular these events may be at first, or in a few trials, yet in time they naturally converge to a certain regular proportion; all irregularities continually correcting one another; so that these events incessantly tend to some determined rule. Whence follows this remarkable conclusion, that regularity arises out of irregularity, and order out of disorder.

And as we find that the occurrence of all events continually approaches to some rule or law, according as experiments and observations increase; so, on the other hand, when we find by multiplicity of observations that these effects of chance ultimately converge to some determined law, we infer that this is the very law according to which these events were originally designed to happen.

And hence we may conclude, that all such laws by which the various effects and productions of chance are regulated, are the effects of intelligence and design, and were instituted by some powerful agent, and intended to subserve some wise and useful purposes which are necessary for preserving the order and economy of the universe; so that the Great Author of Nature makes even apparent chance execute his designs.

*** He who wishes thoroughly to investigate "*The Doctrine of Life Annuities and Assurances*," should study Mr. Francis Baily's valuable book bearing that title.

A TABLE of the Value of an Annuity of £.100 per annum on a single Life, from Birth to Ninety Years old, as fixed by the Legacy Act.

Age.	Value.			Age.	Value.			Age.	Value.			Age.	Value.		
	£.	s.	d.		£.	s.	d.		£.	s.	d.		£.	s.	d.
Birth.	1032	14	0	23	1568	0	0	46	1208	18	0	69	664	14	0
1	1346	10	0	24	1556	0	0	47	1189	0	0	70	636	2	0
2	1563	6	0	25	1543	16	0	48	1168	10	0	71	607	10	0
3	1646	4	0	26	1531	4	0	49	1147	10	0	72	579	0	0
4	1701	0	0	27	1518	8	0	50	1126	8	0	73	550	14	0
5	1724	16	0	28	1505	6	0	51	1105	14	0	74	523	0	0
6	1748	4	0	29	1491	16	0	52	1084	18	0	75	496	4	0
7	1761	2	0	30	1478	2	0	53	1063	14	0	76	471	0	0
8	1766	4	0	31	1463	18	0	54	1042	2	0	77	445	14	0
9	1762	10	0	32	1449	10	0	55	1020	2	0	78	419	14	0
10	1752	6	0	33	1434	14	0	56	997	14	0	79	392	2	0
11	1739	6	0	34	1419	10	0	57	974	18	0	80	364	6	0
12	1725	2	0	35	1403	18	0	58	951	12	0	81	337	14	0
13	1710	6	0	36	1388	0	0	59	928	0	0	82	312	4	0
14	1695	0	0	37	1371	12	0	60	903	18	0	83	288	14	0
15	1679	2	0	38	1354	16	0	61	879	10	0	84	270	16	0
16	1662	10	0	39	1337	10	0	62	854	14	0	85	254	6	0
17	1646	4	0	40	1319	14	0	63	829	2	0	86	239	6	0
18	1630	18	0	41	1301	16	0	64	803	0	0	87	225	2	0
19	1616	14	0	42	1283	16	0	65	776	2	0	88	213	2	0
20	1603	6	0	43	1265	14	0	66	748	16	0	89	196	14	0
21	1591	4	0	44	1247	4	0	67	721	2	0	90	173	16	0
22	1579	14	0	45	1228	6	0	68	693	0	0				

LONDON BILLS OF MORTALITY.

———*Quod adest, memento*
Componere æquus. Cætera fluminis
Ritu feruntur.

HOR.

The London Bills of Mortality are founded upon the reports of the sworn searchers, who view all dead bodies after decease, and deliver their report to the parish clerks. An annual summary of all these accounts is published on the Thursday before Christmas Day, under the denomination of the Bill of Mortality. The original bills comprehended only 109 parishes; but since the year 1660 the number of parishes is 146. They are divided into 97 parishes *within the walls*; 16 parishes *without the walls*; 23 *out parishes in Middlesex and Surry*; and 10 in the *city and liberty of Westminster*. Various circumstances tend to make these registers *incorrect* as *absolute* accounts; but the relations which they furnish from one year to another, may, nevertheless, be tolerably accurate. If the Dissenters, by means of their library in Red Cross Street, would publish like registers, annually, of births and burials amongst them, such registers, in conjunction with the Bills of Mortality, would be highly useful.

We mean, however, to publish the best accounts we can collect from year to year, and shall rejoice if our correspondents enable us to present similar accounts in reference to other places than the metropolis.

The first statement is of average results for every *five* years between 1730 and 1800.

5 years ending	Burials.	Christenings.
1735	25,490	17,517
1740	27,494	16,144
1745	25,350	14,419
1750	25,352	14,496
1755	21,080	15,119
1760	19,837	14,459
1765	23,992	15,931
1770	22,888	16,440
1775	22,177	17,284
1780	20,743	17,256
1785	18,880	17,263
1790	19,657	18,465
1795	20,228	18,800
1800	19,131	18,708

Comparative view for the years 1810, 1818, 1819, 1820, 1821.

	A.D.1810.	1818.	1819.	1820.	1821.
Died under 2 years of age.	5,853	5,381	4,779	4,758	4.276
Between 2 and 5	2,430	1,815	1,771	1,975	1,793
5 and 10	850	808	826	887	904
10 and 20	695	703	631	667	628
20 and 30	1,218	1,453	1,577	1,484	1,358
30 and 40	1,788	1,884	1,990	2,006	1,817
40 and 50	2,018	2,040	2,095	2,069	1,957
50 and 60	1,648	1,864	1,918	1,878	1,872
60 and 70	1,587	1,585	1,600	1,632	1,612
70 and 80	1,262	1,271	1,230	1,208	1,312
80 and 90	473	722	666	662	771
90 and 100	70	175	144	119	150
100 and 110	1	4	1	3	1

A.D. 1810. Christened. { Males.. 10,188 / Females 9,742 } In all 19,930.

Buried. .... { Males.. 10,441 / Females 9,482 } In all 19,893.

1818. Christened. { Males.. 12,530 / Females 11,703 } In all 24,233.

Buried..... { Males.. 9,883 / Females 9,882 } In all 19,705.

1819. Christened. { Males.. 12,574 / Females 11,726 } In all 24,300.

Buried..... { Males.. 9,671 / Females 9,557 } In all 19,228.

1820. Christened. { Males.. 11,993 / Females 11,165 } In all 23,158.

Buried..... { Males.. 9,794 / Females 9,554 } In all 19,348.

1821. Christened. { Males.. 13,072 / Females 12,160 } In all 25,232.

Buried..... { Males.. 9,379 / Females 9,072 } In all 18,451.

Population: Males, 476,830.....Females, 533,222.

THE FOLLOWING IS THE

CLASSIFICATION OF "DISEASES AND CASUALTIES"

FOR 1820, 1821;

DISEASES.

	Years 1820,	1821
Abscess	90	88
Apoplexy	233	251
Asthma	702	694
Bedridden	1	
Cancer	69	79
Childbed	208	202
Consumption	3959	3639
Convulsions	3066	2921
Croup	104	101
Diabetes	1	
Diarrhœa	9	5
Dropsy	791	769
Dropsy in the Brain	332	290
Dropsy in the Chest	90	75
Dysentery	6	
Epilepsy	9	2
Eruptive Diseases	12	17
Erysipelas, or St. Anthony's Fire	13	23
Fever	1109	1101
Fever (Typhus)	47	48
Fistula	3	1
Flux	6	5
Gout	48	24
Hæmorrhage	25	36
Hooping Cough	794	614
Hydrophobia		2

	Years 1820,	1821
Inflammation	1247	1309
Inflamm. of the Liver	66	57
Insanity	223	222
Jaundice	77	100
Jaw locked	1	1
Measles	720	547
Miscarriage	3	6
Mortification	220	145
Old age and debility	2220	2535
Palsy	176	184
Rheumatism	10	18
Rupture	32	36
Scrophula	7	6
Small Pox	792	508
Sore Throat and Quinsey	15	7
Spasm	46	42
Stillborn	725	688
Stone	18	15
Stoppage in the Stom.	8	12
Suddenly	248	222
Teething	409	428
Thrush	79	78
Venereal	11	6
Worms	18	1
Total of Diseases	19098	18161

CASUALTIES.

	Years 1820,	1821
Bruised		1
Burnt	22	38
Choked	1	
Drowned	96	83
Excessive drinking	2	1
Executed	10	18
Found dead	5	5
Fractured	2	
Frightened	1	1
Frozen	1	

	Years 1820,	1821
Killed by falls and several other accidents	78	92
Murdered	1	10
Scalded	1	3
Strangled	2	
Suffocated	7	6
Suicides	21	32
Total of Casualties	250	290

HEIGHTS OF THE PRINCIPAL MOUNTAINS ABOVE THE LEVEL OF THE SEA.

Europe.

	Feet.		Feet.
Mont-Blanc, *Alps*	15,662	Adelat, *Sweden*	5,180
Mount Rosa, do.	15,530	Hecla, *Iceland*	5,000
Oertler Spitze, *Tyrol*	15,430	Mount-Giant, *Bohemia*	4,990
Corn du Midi. *Alps*	14,270	Puy-de-Dôme, *France*	4,846
Fisterahorn, *Swisserland*	14,000	The Balloon, *Vosges*	4 620
Jung-Frau, do.	13,710	Ben Nevis, *Scotland*	4,380
Mulahasen, *Grenada*	11,700	Ben Lawers, do.	4,020
Mont-Perdu, *Pyrenees*	11,270	Ben More, do.	3,870
Col-de-Géant, *Alps*	11,140	Mount Parnassus, *Spitzbergen*	3,750
Vignemale, *Pyrenees*	11,010	Snowdon, *Wales*	3,570
The Cylinder, do.	10,930	Carnedd Lewellyn, do.	3,469
Ætna, *Sicily*	10,616	Macgillicuddys, *Ireland*	3,400
Budislaw, *Transylvania*	9,890	Schihallien, *Scotland*	3,280
Surul, do.	9,890	Ben Lomond, do.	3,240
Legnone	9,200	Sca Fell, *England*	3,166
Canigou, *Pyrenees*	9,100	Helvellin, do.	3,055
Point Lomnitz, *Carpath*	8,860	Skiddaw, do.	3,020
Monte-Rotondo, *Corsica*	8,700	Pillar, do.	2,893
Monte-d'-Oro, do.	8 630	Bow Fell, do.	2,911
Liptz, *Carpath*	8,310	Cross Fell, do.	2,901
Sneehättan, *Norway*	8,200	Saddleback, do.	2,787
Olympus, *Greece*	6,520	Grassmore Fell, do.	2,756
Lacha, do.	6,520	Cheviott, do.	2,658
Mont-d'Or, *France*	6,510	Nephin, *Ireland*	2,634
Sierra-d'Estre, *Portugal*	5,580	Mourne, do.	2,500
Puy-Mary, *France*	5,440	Whernside, *England*	2,384
Kassberg, Summit, *Styria*	5,220	Ingleborough, do.	2,361
Hussoko, *Moravia*	5,326	Pennigant, do.	2,270
Schneekoppe, *Bohemia*	5,240	Kilhope Law, do.	2,196

America.

Chimborazo, *Peru*	21,441	Gargaviraco, *Peru*	15,680
Cayamba Urca, do.	19,388	Haunca Velica	13,600
Antisana, do.	19,149	Cofre de Perote, *Mexico*	13,280
Cotopaxi, do.	18,820	Mount Elias, *North America*	12,670
Potasi, summit of, do.	18,000	Tolucca, Lake of, *Mexico*	12,200
Ilinissa, do.	17,240	Pico de Tancitaro, *New Spain*	10,500
Catacatche, do.	16,436	Blue Mountains, *Jamaica*	7,275
Sierra Merida, do.	16,420	Sulphatara, *Guadaloupe*	5,100

Asia.

Himalaya Mountains, *Nepal*	27,700	Petcha, *Chinese Tartary*	15,000
Yumunavatari	25,500	Soomoonang, *Bootan*	14,000
Dhailun	24,740	Ghassa, do.	13,080
In the Valley of Nepal	24,625	Mount Ophir, *Sumatra*	13,600
Another Peak in do.	23,050	Ararat, *Turkey*	9,600

Caspian Sea 306 feet *below* the Atlantic.

AFRICA.

	Feet.		Feet.
Peak of Teneriffe	12,220	Gondar Mountains, *Abyssinia*	8,450
Atlas, highest Peak of,	11,980	Mont de Tugo, *Canaries*	7,420
Lamalmon, *Abyssinia*	11,200	R. Entre-deux, *Isle of Bourbon*	6,000
Compass Mountain, *Cape of Good Hope*	10,000	Bonnet Pointou, do.	6,000
Gross Morne, *I. of Bourbon*	10,000	Ruino, *Madeira*	5,160

ALTITUDE OF THE INFERIOR LIMIT OF PERPETUAL SNOW IN DIFFERENT LATITUDES.

Under the Equator	15,744
Latitude 20°	15,090
Latitude 45°	8,360
Latitude 65°	5,920

HEIGHTS OF SOME EDIFICES.

The highest of the Pyramids of Egypt	520
Tower of Strasburgh, above the pavement	466
Tower of St. Stephen, at Vienna	453
Cupola of St. Peter, at Rome	433
Tower of St. Michael, at Hamburgh	426
Tower of St. Peter, at Hamburgh	386
Cupola of St. Paul's, at London	340
Dome at Milan	340
Tower of Asinella, at Bologne	334
Tower of Boston Church	304
The Monument, near London Bridge	202
Leaning Tower at Pisa	200

EPOCHS OF THE PRINCIPAL GEOGRAPHICAL DISCOVERIES.

Canaries, discovered by the Genoese	A.D. 1345
Porto Santo, by the Portuguese	1418
Madeira, by the same	1419
Cape Blanco, by Nuno Tristan	1440
The Azores, by Gonzallo Vello (Portuguese)	1448
Cape Verd Isles, by Antonio Nolli (Genoese)	1449
Fayal, by Martin Behem (Nuremb.)	1459
Cape of Good Hope	1459
Coast of Guinea, by the Portuguese	1471
Congo, by Diego Cam (Portuguese)	1484
Brazil, by Martin Behem	1484
San Salvador, America, by Columbus, Oct. 11	1492
The Antilles, by do.	1493
Indies, East Coast of Africa, Malabar, &c. by Vasco de Gama	1498
Eastern Coast of America, by Vespucius	1499
River of the Amazons, Vinc. Pinzon	1500

Saint Helena, John de Nova (Portuguese)	A.D. 1502
Ceylon, by Laur. Almeyda	1506
Sumatra, by the Portuguese	1508
The Moluccas	1511
Florida, by the Spaniards	1512
South Sea, by Nunez Balboa	1513
Peru, Perez de la Rua	1515
Rio Janeiro and Rio de la Plata	1516
China, by Fernandez d'Andrada (Portuguese)	1517
Mexico, by Fernandez de Cordova	1518
First voyage round the World, by Magellan, Ladrones, &c. discovd.	1521
Conquest of Mexico, by Pizarro	1524
Bermuda, by Bermudez (Spaniard)	1527
New Guinea	1528
Coasts of Acapulco	1534
Canada, by Jas. Cartier (Frenchman)	1535
California	1535
Chili, by Diego of Almagro	1536
Islands of Licaio	1541
Heinam	1541
Japan	1542
Cape Mendocino	1542
The Missisippi, by M. Alvarado	1543
Straits of Waygate, by S. Burroughs	1556
Frobisher's Straits	1576
Proposal to colonize America	1583
Drake's Voyage, from	1579 to 1590
Davis's Straits	1587
Falkland Isles, by Hawkins	1594
Chesapeak Bay, by John Smith	1607
Hudson's Straits, &c.	1610
Baffin's Bay	1616
Cape Horn, by Jacob Lemaire	1616
Van Diemen's Land, New Zealand, &c. by Tasman	1642
New Britain, &c. by Dampier	1700
Behring's Straits	1728
Taiti, Wallis	1767
Navigation Isles, Bougainville	1768
New Caledonia, by Cook	1774
Sandwich Isles, &c. do.	1778
New South Shetland, by W. Smith, February	1819
Islands, &c. West of Lancaster Sound, by Captain Parry	1819

ASTRONOMICAL OBSERVATIONS AND DISCOVERIES, &c.

Fernel measured an Arc of the Meridian	A.D. 1528
Spots on the Sun, discovered by Harriot and Galileo	1610
Jupiter's Satellites, by Harriot and Galileo	1610
Phases of Venus (Galileo)	1611
Kepler's Laws	1618
Norwood measured $2\frac{1}{2}$ degrees	1635
Morin observed Stars and Planets by day-light	1635

Saturn's 4th Satellite (Huyghens) ..... A.D. 1655
Pendulum Clocks, do. 1657
Rotation of Jupiter (Cassini) 1665
——— of Venus and Mars, do. 1666
Saturn's 5th Satellite, do. 1671
Newton discovered the Laws of Gravitation 1666
Saturn's 3d Satellite (Cassini) 1672
Newton's Optical Discoveries 1672
Velocity of Light (Roemer) 1675
Saturn's 1st and 2d Satellites (Cassini) 1684
Newton's Principia published 1687
Compression of Jupiter 1691
Aberration of Light (Bradley) 1728
Arc of Meridian (Cassini) 1718
——— (Maupertuis, &c.) 1736
Nutation of the Earth's Axis (Bradley) 1747
Hutton computed the Earth's density, from Maskelyne's Observations at Schehallien 1778
Herschel discovered Uranus 1781
Saturn's 6th and 7th Satellites (Herschel) ..... 1787 and 1788
Rotation and Compression of Saturn, do. 1789
Rotation of Mercury (Schroëter) 1800
Ceres (Piazza) 1801
Pallas (Olbers) 1802
Juno (Harding) 1803
Vesta (Olbers) 1807
Astronomical Society of London, established 1820

INVENTION OF NAUTICAL AND ASTRONOMICAL INSTRUMENTS.

Mariner's Compass brought into Europe from China, by Marcus Paulus ..... A.D. 1260
Variation of Compass, discovered by Cabot 1540
Log employed in Navigation, about 1570
Telescope, about 1590
Davis's Sea Quadrant 1590
The Thermometer, about 1600
Telescope with two Convex Glasses (Kepler) 1611
Compound Microscope 1621
The Vernier 1631
Barometer (Torricelli) 1643
Micrometer (Gascoine) 1641
Reflecting Telescope, described by Gregory 1663
Newton's Reflecting Telescope, executed in 1672
Transit Instrument (Roemer) 1700
Reflecting Sextant (Hadley) 1731
The Heliometer (Bouguer) 1747
Hall constructed an Achromatic Telescope 1750
Mayer's first Idea of the repetition of Angles 1752
Dollond published the Discovery of Achromatic Telescopes 1758

Mayer's Reflecting Circle ..... A.D. 1767
Borda's do..... 1775
Micrometer of Rock Crystal (Rochon)..... 1775
Borda's Repeating Circle 1786
Barlow's Magnetical Discoveries applied to the deviation of the Needle..... 1819
Dr. Pearson's Micrometer 1819

TABLES OF SPECIFIC GRAVITIES.

Solids.

Platina	20,722	Marble, green, Campanian	2,742
Gold, pure, hammered	19,362	—— Parian	2,837
Guinea of George III.	17,629	—— Norwegian	2,728
Tungsten	17,600	—— green, Egyptian	2,668
Mercury, at 32° Fahrenheit	13,598	Emerald	2,775
Lead	11,352	Pearl	2,752
Palladium	11,300	Chalk, British	2,784
Rhodium	11,000	Jasper	2,710
Virgin Silver	10,744	Coral	2,680
Shilling of George III.	10,534	Rock Crystal	2,653
Bismuth, molten	9,822	English Pebble	2,619
Copper, wiredrawn	8,878	Limpid Feldspar	2,564
Red Copper, molten	8,788	Glass, green	2,642
Molybdena	8,611	—— white	2,892
Arsenic	8,308	—— bottle	2,733
Nickel, molten	8,279	Porcelaine, China	2,385
Uranium	8,100	—— Limoges	2,341
Steel	from 7,767 to 7,816	Native Sulphur	2,033
Cobalt, molten	7,812	Ivory	1,917
Bar Iron	7,788	Alabaster	1,874
Pure Cornish Tin	7,291	Alum	1,720
Do. hardened	7,299	Copal, opaque	1,140
Cast Iron	7,207	Sodium	973
Zinc	6,862	Oak, heart of,	950
Antimony	6,712	Ice	930
Tellurium	6,115	Potassium	866
Chromium	5,900	Beech	852
Spar, heavy	4,430	Ash	845
Jargon of Ceylon	4,416	Apple-Tree	793
Oriental Ruby	4,283	Orange-Wood	705
Sapphire, Oriental	3,994	Pear-Tree	661
Do. Brazilian	3,131	Linden-Tree	604
Oriental Topaz	4,019	Cypress	598
Oriental Beryl	3.549	Cedar	561
Diamond	from 3,501 to 3,531	Fir	550
English Flint Glass	3,329	Poplar	383
Tourmalin	3,155	Cork	240
Asbestus	2,996		

LIQUIDS.

Sulphuric Acid	1,841	Burgundy Wine	991
Nitrous Acid	1,550	Olive Oil	915
Water from the Dead Sea	1,240	Muriatic Ether	874
Nitric Acid	1,218	Oil of Turpentine	870
Sea-Water	1,026	Liquid Bitumen	848
Milk	1,030	Alcohol, absolute	792
Distilled Water	1,000	Sulphuric Ether	716
Wine of Bourdeaux	994	Air at the Earth's surface, about	1⅛

*** Since a Cubic Foot of Water at the temperature 40° Fahrenheit, weighs 1000 Ounces Averdupois, or 62½ Pounds, the Numbers in the preceding Tables exhibit very nearly the respective Weights of a *Cubic Foot* of the several Substances tabulated.

TABLE

OF THE

DEGREES OF DIFFERENT THERMOMETERS

(omitting Fractions) at which some chemical Phænomena occur.

	Fahr.	Reau.	Cent.	Wedg.
Cold produced by Mr. Walker	— 90	— 54	— 68	
Nitric Acid freezes	— 66	— 44	— 55	
Mercury freezes	— 39	— 32	— 39	
Brandy freezes	— 7	— 17	— 14	
Cold produced by mixing equal parts of Snow and Muriate of Soda	0	— 14	— 18	
Strong Wines freeze	20	— 5	— 6	
Water freezes	32	0	0	
Vinous fermentation begins	59	12	15	
Ditto rapid, and Acetous begins	77	20	25	
Acetous Fermentation ceases	88	25	31	
Ether boils	98	29	36	
Spermaceti melts	112	36	45	
Tallow melts	127	42	53	
Ammonia separates from Water	130	44	54	

TABLE continued.

	Fahr.	Reau.	Cent.	Wedg.
Bees' Wax melts	142	49	61	
Camphor sublimes	145	50	63	
Bleached Wax melts	155	55	69	
Sulphur evaporates	170	61	77	
Alcohol boils	176	64	80	
Water boils	212	80	100	
Sulphur melts	234	89	111	
Nitrous Acid boils	242	93	116	
Sulphur burns slowly	303	120	150	
Tin melts	442	182	227	
Sulphuric Acid boils	590	248	310	
Lead melts	612	258	325	
Mercury boils	660	279	350	
Zinc melts	700	297	371	
Iron, a bright red in the dark	750	315	384	
Hydrogen Gas burns	800	341	427	
Iron, red in the twilight	884	380	475	
—— red hot in a common fire	1050	448	560	
—— red heat in day-light	1077	462	577	1
Enamel colours burnt	1807	737	986	6
Diamond burns	2897	1451	1814	14
Brass melts	3807	1678	2100	21
Copper melts	4587	2024	2530	27
Silver melts	4717	2082	2602	28
Gold melts	5237	2313	2780	32
Delft Ware fired	6507	2880	3580	40
Cream-coloured Stone Ware fired	12257	5370	6770	86
Flint Glass Furnace, greatest heat	15897	7025	8770	114
Smith's Forge	17327	7650	9600	125
Cobalt melts—Cast Iron melts	17977	7975	9850	130
Nickel melts	20577	9131	11414	150
Iron melts	21637	9602	12001	158
Manganese melts	21877	9708	12136	160
Platina melts	23177	10286	12857	170
Greatest heat observed	25127	11100	13900	185

EUROPEAN ITINERARY MEASURES.

A Comparison of the Miles, Leagues, and other Itinerary Measures of different Countries; namely, the Length of each Mile, &c. in English Yards and in French Kilometres; also, the Number of each answering to 100 English Miles.

	Length of a single Measure of each sort.		Number of each equal to 100 English Miles.
	Eng. Yds.	Fr. Kiloms.	
Arabia.....Mile	2148	1·964	81·936
Brabant....League	6076	5·556	28·966
China.....Li	632	0·577	278·481
Dantzic....Mile	8475	7·749	20·767
Denmark..Mile	8244	7·538	21·348
England....Mile	1760	1·609	100·000
Mile, Geographical....	2025	1·851	86·913
Flanders....League	6864	6·276	25·641
France.....Kilometre	1093	1·000	161·024
League of 2000 Toises	4263	3·898	41·285
League of 25 to the Deg.	4860	4·444	36·214
League, Marine	6076	5·555	28·966
Germany..Mile, Geographical....	8101	7·407	21·725
Mile, long	10126	9·258	17·381
Mile, short	6859	6·271	25·659
Hamburgh..Mile	8244	7·538	21·348
Hanover....Mile	11559	10·569	15·226
Holland....Mile	8101	7·407	21·725
Hungary....Mile	9113	8·332	19·313
Ireland....Mile	2240	2·048	78·571
Netherlands Mile, Metrical	1093	1·000	161·024
Persia.....Parasang	6086	5·565	28·918
Poland....Mile, long	8101	7·407	21·725
Mile, short	6076	5·555	28·966
Portugal....League	6760	6·181	26·035
Prussia....Mile	8237	7·532	21·367
Rome.....Mile	1628	1·489	108·108
Mile, Metrical	1093	1·000	161·024
Mile, Geographical....	2025	1·851	86·913
Russia.....Werst	1167	1·066	150·314
Scotland....Mile	1984	1·814	88·709
Spain.....League, Common	7416	6·781	23·732
League, Judicial	4635	4·238	37·972
Sweden....Mile	11700	10·698	15·042
Switzerland Mile	9153	8·369	19·228
Tuscany....Mile	1808	1·653	97·345
Turkey....Berri	1826	1·669	96·385

(*From Dr. Kelly's Cambist.*)

HISTORICAL TABLE OF ENGLISH COINS:

Shewing the Alterations they have undergone from the Reign of William the Conqueror to that of George IV., with respect both to their Weight and Fineness: also, a Statement of the Comparative Value of Gold and Silver at different Periods.

Date.	Reign.	SILVER. Fineness of Silver Coins.	SILVER. lb. Troy of such Silver coined into	GOLD. Fineness of Gold Coins.	GOLD. lb. Troy of such Gold coined into	Comparative Value of fine Gold and Silver.
		oz. dwt.	£. s. d.	car. gr.	£. s. d.	Gold. Silver.
1066	William I.	11 2	1 1 4	.....	.....	.....
1280	8 Edw. I.	— —	1 1 4	.....	.....	.....
1344	18 Edw. III	— —	1 1 6	23 3½	14 0 10	1 to 12·584
1349	23 ———	— —	1 3 0	— —	14 18 8	1 — 11·571
1356	30 ———	— —	1 6 8	— —	16 0 0	1 — 11·158
1421	9 Henry V.	— —	1 12 0	— —	17 16 0	1 — 10·331
1464	4 Edw. IV.	— —	2 0 0	— —	22 4 6	1 — 10·331
1465	5 ———	— —	2 0 0	— —	24 0 0	1 — 11·158
1470	49 Hen. VI.	— —	2 0 0	— —	24 0 0	1 — 11·158
1482	22 Edw. IV.	— —	2 0 0	.....	24 0 0	1 — 11·158
1509	1 Hen. VIII	— —	2 0 0	.....	24 0 0	1 — 11·158
1527	18 ———	— —	2 2 8	22 0	24 0 0	1 — 11·268
1543	34 ———	10 0	2 8 0	23 0	28 16 0	1 — 10·434
1545	36 ———	6 0	2 8 0	22 0	30 0 0	1 — 6·818
1546	37 ———	4 0	2 8 0	20 0	30 0 0	1 — 5·000
1547	1 Edw. VI	4 0	2 8 0	20 0	30 0 0	1 — 5·000
1549	3 ———	6 0	3 12 0	22 0	34 0 0	1 — 5·151
1551	5 ———	5 0	3 12 0	23 3½	34 0 0	1 — 11·000
1552	6 ———	11 1	3 0 0	22 0	36 0 0	1 — 11·050
1553	1 Mary ..	11 0	3 0 0	23 3½	36 0 0	1 — 11·057
1560	2 Elizabeth	11 2	3 0 0	22 0	36 0 0	1 — 11·100
1600	43 ———	— —	3 2 0	23 3½	36 10 0	1 — 10·904
1604	2 James I.	— —	3 2 0	22 0	33 10 0	1 — 12·109
1626	2 Chas. I.	— —	3 2 0	— —	41 0 0	1 — 13·346
1666	18 Chas. II.	— —	3 2 0	— —	44 10 0	1 — 14·485
1717	3 George I.	— —	3 2 0	— —	46 14 6	1 — 15·209
1816	56 Geo. III.	— —	3 6 0	— —	46 14 6	1 — 14·287
1821	2 Geo. IV.	— —	3 6 0	— —	46 14 6	1 — 14·287

By the above Table it appears that Silver Coins have been diminished in value, during the last 500 Years, in the ratio of 99 to 32, and Gold Coins nearly as 3½ to 1. It may be remarked, that within the same period the Silver Coins of France and Spain have been debased in the ratio of about 17 to 1.

[For a larger Table, see the PANTOLOGIA, article *Money*.]

USEFUL RESULTS OF COMPUTATIONS AND EXPERIMENTS.

The Pendulum vibrating seconds of mean solar time at London in a vacuum, and reduced to the level of the sea, is 39·1393 inches; consequently the descent of a heavy body from rest in one second of time in a vacuum, will be 193·145 inches. The logarithm 2·2858328.

A platina metre at the temperature of 32°, supposed to be the ten-millionth part of the quadrant of the meridian, 39·3708 inches. The ratio to the imperial measure of three feet as 1·09363 to 1, the logarithm 0·0388717.

The five following standards accurately measured, give these results:—

Gen. Lambton's scale, used in the Trigonom. Surv. of India,	35·99934 inches.
Sir G. Shuckburgh's scale (which for all purposes may be considered as identical with the imperial standard)	35·99998
Gen. Roy's Scale	36·00088
Royal Society Standard	36·00135
Ramsden's bar	36·00249

Weight of a cubic inch of distilled water in a vacuum at the temp. 62°, as opposed to brass weights in a vacuum also, 252·722 grains	log. 2·4026430
Consequently a cubic foot 62·3862 pounds avoirdupois	log. 1·7950887
Weight of a cubic inch of distilled water in air at 62° of temperature with a mean height of the barometer 252·456 grains	log. 2·4021857
Consequently a cubic foot 62·3206 pounds avoirdupois	log. 1·7946314
And an ounce of water 1·73298 cubic inches	log. 0·2387924
Cubic inches in the imperial gallon, 277·276	log. 2·4429124
Diameter of the cylinder containing a gallon at one inch high, 13·78933	log. 1.2739112

Specific gravity of water at different temperatures, that at 62° being taken as unity.

70°	0·99913	62°	1·	52°	1·00076	44°	1·00107
68	0·99936	58	1·00035	50	1·00087	42	1·00111
66	0·99958	56	1·00050	48	1·00095	40	1·00113
64	0·99980	54	1·00064	46	1·00102	38	1·00113

The difference of temperatures between 62° and 39°, where water attains its greatest density, will vary the bulk of a gallon of water rather less than the third of a cubic inch.

And assuming from the mean of numerous estimates the expansion of brass 0.00001044 for each degree of Fahrenheit's thermometer, the difference of temperatures from 62° to 39° will vary the content of a brass gallon measure just one-fifth of a cubic inch.

It appears that the specific gravity of clear water from the Thames, exceeds that of distilled water at the mean temperature in the proportion of 1·0006 to 1, making a diff. of about one-sixth of a cubic in. on a gallon.

Rain water does not differ from distilled water, so as to require any allowance for common purposes.

(*Appendix, Report of House of Commons on Weights and Measures.*)

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